

DESPATCH

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SUBJECT *Town planning schemes of the City of Alexandria*

MUNICIPALITY OF ALEXANDRIA.

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City of Alexandria Town Planning Scheme

By **W. H. McLEAN, M. Inst. C.E.,**
Member of the Institution of Municipal
and County Engineers; Member of the
———Town Planning Institute;———
Engineer-in-Chief, Municipality of
Alexandria.

Descriptive Note and Plans.



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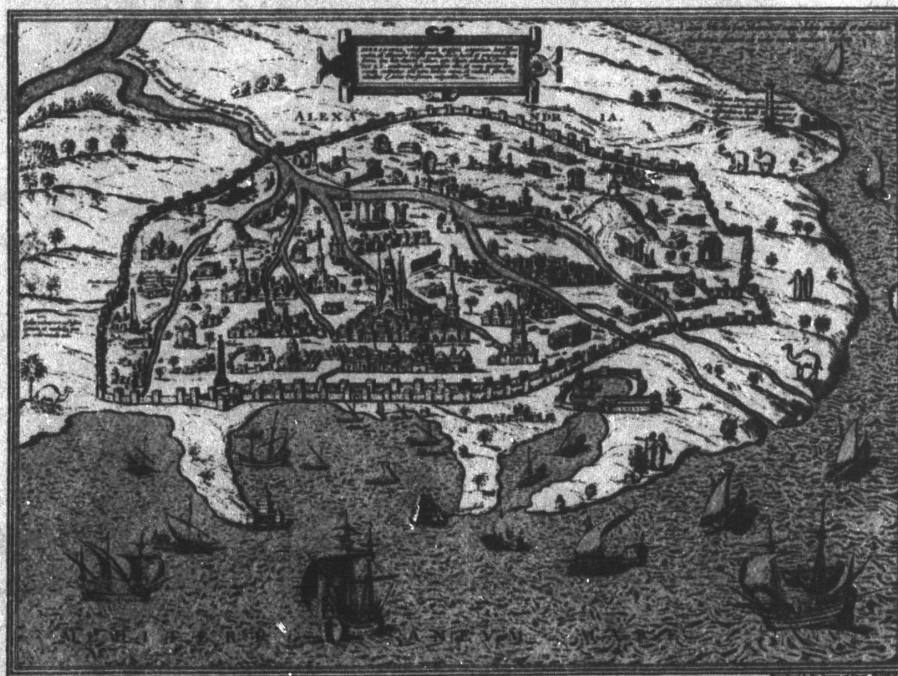
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PREFACE.

By Dr. A. GRANVILLE, C.M.G., C.B.E., Vice-President, Alexandria Municipality.

City of Alexandria Town Planning Scheme.

This scheme for the Town Planning of the City of Alexandria and its environs, which was formally approved by the Alexandria Municipal Council at its meeting on June 15, 1921, marks, I consider, a real step in advance in the municipal life of the town, and of municipal life generally in Egypt.

To those who have had to work in connection with the towns of Egypt it has been a heart-breaking experience to find no trace of any scheme of town planning, no provision for proper communications, etc., in towns which are rapidly developing and where the type of building is becoming every year more solid in construction and of larger dimensions.

What happened in the past was something like this.

An agricultural or garden zone suddenly became the object of development for building. No regulating plan existed. Houses sprang up in all directions and usually the only access was by narrow mean streets, without proper alignment, unlevelled, unpaved and without footpaths, but this was all that the uncontrolled cupidity of the original owners of the land had allowed for streets. Think of it! a new quarter for the town with no squares, no open spaces, just small, mean unlevelled tortuous streets.

If this was bad in the smaller towns, it was particularly unfortunate in large towns like Alexandria or Tanta.

Old gardens and large estates were cut up and built on without any allowance for proper communications or aeration.

And behind this development (?) the Local Authority crept, or rather hobbled, along with its "Tanzim" (street improvements and alignments).

Long after the houses had been put up, streets of minimum width were decreed. The necessary space was acquired at great expense, or by long waiting for the buildings to fall into disrepair and by forbidding all repairs, so that the expense of expropriation could be diminished. It is a sorry picture of want of town management and the whole procedure was bad. The unlucky owners of the houses were mulcted in some way or other because no foresight had been shown in planning the town.

It has been, up to the present, an unfortunate feature of Municipal work in Egypt, that the development of the necessary items of communal town life, such as public gardens, squares, bridges and open spaces of all kinds has been left to the fashion or fancy of the moment and no scheme has been foreseen as to the proper lines to develop the town.

The present scheme of Mr. McLean is a worthy attempt to prevent the possible recurrence of such a state of chaos which I have briefly alluded to above.

It must be clearly understood that this is not a cut-and-dried scheme to be applied absolutely, whether it fits or not the conditions of the future.

Far from it; it is meant to be a guide to the future development of Alexandria and it was with that purpose that it has received the approval of the Council.

It is hoped that the citizens of Alexandria will take an interest in it and be enlightened by it.

Most certainly it will be modified in many of its details. Nothing but future experience can tell us where these modifications may be required. But it represents an attempt to treat the city question as a whole. It will be a guide to future councillors as to what the present Council hoped the town would be. It will, it is expected, prevent any irregular and uncontrolled modification of any undeveloped portion of the town area and, I hope, in the future, save the heavy expenditure which is now incurred yearly, and which will go on for many years, in correcting the present unfortunate street alignments and in reopening necessary spaces.

Alexandria, June 1921.

ALEX. GRANVILLE.

MUNICIPALITY OF ALEXANDRIA.

City of Alexandria Town Planning Scheme.

Descriptive Note on the Scheme

By W. H. McLean, M.Inst.C.E., Engineer-in-Chief.

INTRODUCTORY.

The Municipal Commission, at its meeting on October 30, 1918, decided upon the preparation of a town planning scheme for the city of Alexandria with the idea of assuring its future development on an approved programme and honoured the author with instructions to prepare the project. The necessary studies were proceeded with and a preliminary plan and report were presented on October 21, 1919.

The preliminary plan indicated generally the proposals regarding the principal avenues and streets, parks and public gardens, as well as the areas suggested to be reserved for public requirements such as cemeteries, public buildings and services, and for archaeological research.

H.H. the Sultan, in His great interest for the welfare of our city, deigned to express a desire to be informed regarding the project and honoured the author with an audience at which this preliminary plan was submitted. His Highness kindly expressed His satisfaction with the project regarding which He deigned to suggest some very valuable ideas.

The preliminary project was duly submitted to the Municipal Delegation and the various committees interested and some useful suggestions were made; and finally it was considered by the Municipal Commission at its meeting on November 12, 1919, when kind approval was expressed and instructions given to proceed with the definite project.

The author has now completed the scheme and has pleasure in submitting it with this descriptive note and relative plans, photographs, etc.

The Aim of and Necessity for Town Planning.—The main point to be noted is that this scheme for Alexandria provides a programme on which the city may be improved and developed on preconceived and approved lines and not allowed to grow in haphazard fashion with objectionable results. The disadvantages of not having a town plan are apparent, in the too narrow streets, inconvenient alignments, congested areas, and similar unsatisfactory features both in the city and in the suburbs. The resulting direct loss to the town is incalculable in the prejudice to the health of the inhabitants and the depreciation in the value of property. By town planning these unsatisfactory results may be largely avoided. The scheme now submitted is to some extent a general programme, and many details remain to be worked out as further development takes place in future years.

This project is similar to the schemes prepared by the author for the cities of Jerusalem and Khartoum, which were duly approved in their time and have been put into operation.

In preparing this scheme for Alexandria it was necessary to make a civic survey of the city, due consideration being given to the historical and archaeological problem as well as to the requirements of commerce and industry and to the convenience and well-being of the inhabitants. In considering these objects one must so far as possible unite the ideal with the practical in such matters as the opening up of congested areas, the provision of public parks and "places" (squares), the planning of main avenues for the aeration of the city, and to facilitate communication between the various quarters of the city and the suburbs.

Improvements carried out by the Municipality.—The Municipality of Alexandria since its institution has given much consideration to town improvement works, and opportunities which have occurred in this direction have not been lost. The creation of the North and South Parks on the old fortifications is a very fine example of this forethought and adds greatly to the beauty of the town (Photos Nos. 16, 17, and 18). Another example may be quoted in the Eastern Harbour reclamation works with the pleasing sweep of promenade quay wall (Photo No. 15). When the breakwater works have been completed, this will form one of the most beautiful harbours in the Mediterranean. The Corniche road which has also been commenced will add greatly to the attractions of the town (Photo No. 22). The more utilitarian works of street improvement and main drainage have not been forgotten, and when the latter is completed it will be a great amelioration in the sanitary condition of the town. The municipal public gardens at Nuzha and the adjoining Antoniadis Garden form a very attractive feature of the city (Photos Nos. 25 and 26). Photograph No. 20 is a view of the "Place Mohamed Ali," which is the principal square in the city.

A certain amount of work has already been done in opening up streets and forming small gardens in the older and more congested parts of the city. Owing to the recent great increase of motor traffic many corners are found to be dangerous, and these are being studied with a view to improvement.

The Municipality has several important projects in progress or under study, such as the East Harbour works and the Drainage works already referred to, a project for a port on the Mahmudiya Canal, new museums, public library, Infectious Diseases Hospital, a housing scheme to replace existing slums (*échèches*), and the programme included in the town planning scheme referred to later.

History of Alexandria.—Before proceeding to a description of the town planning scheme which deals with the present and future city of Alexandria, we must first make a survey of the ancient cities so as to obtain a proper understanding of the problems involved, and in this connection a historical note on ancient Alexandria, which is a summary of his book "Alexandrea ad Ægyptum," has been kindly prepared for this report by Dr. Breccia, Curator of the Municipal Museum (see Appendix I).

Ptolemaic City.—It will be seen from this note that the City of Alexandria was founded by Alexander the Great about the year 332–331 B.C., the town planner being Dinocrates, and that in the reign of Ptolemy II (285–246 B.C.) Alexandria had become quite a large and beautiful city. Plan No. 1 shows this Ptolemaic city, which appears to have been regularly laid out on a gridiron principle, giving long straight avenues and streets communicating with the gateways in the walls surrounding the city. The two principal streets intersected near the centre of the town and were nearly 35 metres wide, and aqueducts passed under the streets carrying the water supply to numberless cisterns. The city was surrounded by a wall, but near the close of the Ptolemaic epoch large residential suburbs had grown up to the east of the city along the coast. This area was known as Eleusis on the Sea and Nicopolis and embraces the existing suburbs between the city and Bulkeley. Between this point and Abukir there were doubtless many villas dotted along the sea coast. At Abukir were situated the ancient cities of Canopus and Menouthis.

To the west of the Ptolemaic city, i.e. between Gabbari and Mex, extended the Necropolis, where the cemeteries of the city were situated.

The Caesareum is one of the few buildings which can be located with certainty, as it is known that the two obelisks called Cleopatra's Needles, which were in position until the middle of the nineteenth century, marked one of the entrances to the building. Excavations have shown that it must have been a very large structure. The two obelisks came originally from the temple of Heliopolis and bear the cartouches of Thothmes III, Ramses II, and Seti II. It will be seen that the town planning scheme proposes a "place" (square) to be created where these obelisks formerly stood (Plans No. 10 and 11 and Photo No. 24).

The dyke between the ancient island of Pharos and the mainland was the site of the Heptastadium, which appears to have been originally constructed to form a roadway connecting the island with the mainland and thus forming two ports, corresponding with the Eastern and Western Harbours of to-day. There were two openings in the Heptastadium to facilitate communication between the ports which were spanned by bridges. The canal through the isthmus of Râs el Tin proposed under the town planning scheme will be used for the same purpose.

Arab City.—Plan No. 2 shows the Arab city, which succeeded the Ptolemaic city. The Arab conquest took place in the year 641 A.D., at which time a great part of what remained of the ancient city was destroyed and on its ruins the Arab city sprang up. It was a walled city, covering a smaller area than in Ptolemaic times, and it existed throughout the middle ages. The ruins of the ancient buildings gradually disappeared in the process of development.

Modern City.—From the Arab city the modern Alexandria has sprung, and now but little trace of either the Ptolemaic or Arab cities remains. Plan No. 3 shows an aerial view of the modern city, which extends approximately over the area occupied by the Ptolemaic city. This plan is reproduced by the kind permission of the British Military Authorities.

Future City.—The General Plan No. 4 of the town planning scheme shows the future city of Alexandria, which will extend along the coast from Abukir on the east to Agami on the west, and covers an area rather more extensive than that which was occupied by the Ptolemaic city and its outlying suburbs. It is interesting to note that the population of the Ptolemaic city and that of the future city as now planned will very probably be about the same, i.e. one million. The inhabitants of the ancient city within the walls were doubtless very much overcrowded according to modern ideas. The length of the future city as planned will be about thirty-six kilometres (22½ miles) with a maximum width of about five kilometres (3.12 miles) and a minimum width of about one kilometre (0.62 mile).

TOWN PLANNING SCHEME.

The city of Alexandria is situated on the shores of the Mediterranean, on north latitude $31^{\circ} 12'$ and east longitude $27^{\circ} 31'$; it possesses an excellent climate on the whole, and the hot desert winds which blow in Cairo and the south in summer do not often occur, so that during the greater part of the year there are cool breezes from the sea. The humidity during the late summer months is often very high; the rainy season is during the winter months and averages about sixteen centimetres per annum. The temperature in summer does not usually exceed 33° centigrade.

Alexandria is the commercial capital of Egypt, and the result of the census of 1917 showed a total population of 444,617, of which 84,706 are non-Egyptians.

The city is built on the sandy ridge along the sea-coast between the sea and Lake Maryût. The proposed extensions have been planned along this ridge, for even when the lake is eventually lowered or pumped dry the land reclaimed will be more suitable for agricultural purposes than for building.

Main Features of the Scheme.—The main features of the project as shown on the General Plan (Plan No. 4) are as follows:—

(1) The provision of a "Champ de Mars" in front of the Râs el Tîn Palace, connected by an avenue forty metres wide to the proposed "Place" (square) at the mosques of Sidi Abu el Abbas, Sidi el Boussiri, and Sidi Yacout (Plans Nos. 6, 7, and 8).

(2) The cutting of a canal twenty metres wide through the isthmus of Râs el Tîn, connecting the eastern and western harbours, having a parallel road on either side, fifteen metres wide, and with five opening bridges spanning the canal (Plans Nos. 5 and 9).

(3) The present site of the Egyptian State Railways Cairo Station to be reserved for a future "Place," in which a public building such as a municipal theatre may be erected. Sites for public buildings are reserved surrounding the "Place." (Plans Nos. 12 and 13).

(4) The provision of a "Place" on the quays of the east harbour at the extremity of Rue Missalla, extending westwards from the Italian Consulate, to include the sites of the two obelisks which marked the entrance to the Caesareum. Of these two obelisks, which are known as Cleopatra's Needles, one is now in England and the other in America. It is suggested that their ancient sites might be suitably indicated on the ground by means of obelisks or columns (Plans Nos. 10 and 11 and Photo No. 24). This "Place" provides a suitable site for a public building if desired.

(5) The land between Ibrahimiya and the cemeteries at Chatby to be reserved for temporary use as a "Champ de Mars" and to be subsequently developed as a Garden City separated from the cemeteries by a wooded park.

(6) When Lake Hadra is drained, an opportunity will occur for the provision of a sporting club and racecourse and also for an aerodrome surrounded by a park, through which it is proposed to run an avenue fifty metres wide, connecting the city to Abukir, as shown on the General Plan (Plan No. 4).

(7) The sites of the ancient cities of Canopus and Menouthis have been reserved for archaeological research, and the land at Abukir point is indicated as a site for a public park (Plan No. 4).

(8) Provision is made for the extension of the Corniche Road eastwards from the city as far as Abukir (Plan No. 4).

(9) The district of Agami will be developed on garden suburb lines and provision is made for various "Places": it will be connected to the city by avenues running parallel to the Mex Road, which is the main connecting link with the city (Plan No. 4).

(10) The opening of an avenue twenty metres wide in the congested Manshiya quarter, connecting Rue Sidi Metwalli with a proposed "Place" at the mosque Sidi el Magaouri (Plan No. 4).

(11) Reservations for parks in various parts of the city, such as Râs el Tîn, Kôm el Nadûra, Government Hospital, and Pompey's Pillar, have been proposed (Plan No. 4).

(12) A site at Sidi Bishr for the new cemeteries has been indicated (Plan No. 4).

(13) Reservations of sites for various public buildings and public utility requirements are proposed.

Avenues and Streets (Principal).—Considering in detail the proposed principal avenues and streets, we shall commence with those in the older and more congested parts of the city. The most interesting proposal is the avenue forty metres wide between the palace of Râs el Tîn and the mosques of Sidi Abu el Abbas and Sidi el Bussiri (Detail Plan No. 6). In front of the palace an oval "Champ de Mars" is provided at the entrances to which an ornamental archway is suggested and a wide stairway leading to the palace (Plan No. 8). From this "Champ de Mars" the avenue runs eastwards tangential to Anfûshy Bay and sweeping round towards the mosques of Sidi Abu el Abbas and Sidi el Bussiri, where a large "Place" is proposed having an opening to the Eastern Harbour (Plan No. 7). It will be seen, on referring again to the General Plan (No. 4), that in the Râs el Tîn quarter many improvements are proposed in the widening of existing streets and the creation of new streets, the principal one being the avenue twenty metres wide in the Manshiya quarter, connecting Rue Sidi Metwalli with a proposed "Place" at the mosque Sidi el Magaouri at Râs el Tîn. This quarter is very much congested and the streets are nearly all narrow and crooked.

In the Labbân quarter there are also many proposed improvements, the principal one being the widening of the Rue Sidi Metwalli, terminating in the proposed "Place" at the mosque El Hag Nazir. A "Rond Point" (circus) is proposed at the crossing of the Rue Sidi Metwalli and Rue Abu Dardar and another at the crossing of Rue Fouad I^{er} and Rue Nabi Daniel in order to meet the traffic requirements at these important crossings.

In the Attarin quarter the principal proposal is the extension of the Rue Missalla to the Rue Fouad I^{er} and thence across to the Rue Kôm el Dik. It is also suggested to continue the Rue Antonius through the Museum to connect Sharia el Farena. This can be done when the Museum building is transformed, as proposed, into municipal offices and access to the two parts of the building can be provided by means of arches over the street. The plan also shows the Rue Sesostris continued to meet the Boulevard de Ramleh.

These are the principal proposals in the centre of the city, and we shall now consider the main arteries leading to the suburbs.

When any great extension of the town towards Abukir takes place it will be found that the present Ramleh road, the widening of which would be costly, is too narrow to meet the future traffic requirements, and also that as the town extends southwards of Ramleh it will be seen that a main road running parallel to and further south of the Ramleh road is necessary.

It is therefore proposed that a new avenue be provided, fifty metres wide, leaving the Ramleh road at a point behind Ibrahimia, passing under the railway at two points and running across Lake Hadra (which will eventually be drained) and thence following a line

parallel to the coast. From a point near the proposed Sidi Bishr cemeteries the width of the avenue is reduced to forty metres, and it terminates in a large "Place" at Mandara. From this "Place" two diagonal avenues twenty metres wide on each side of the railway lead to Abukir (Plans Nos. 4 and 5).

Another main artery leading eastwards from the city will be the proposed Corniche Road, which is planned to run almost continuously along the coast from the Eastern Harbour to Abukir (Plan No. 5).

It will be seen from the General Plan (No. 4) that there are two main arteries leading from the city westwards to the proposed suburb at Agami. One of these follows the existing main road, which has been improved in places, especially to the west of the railway bridge, where a road giving a direct access to the bridge will run through the Gabbari *échèches*. It will be seen that this insanitary area is to be eventually replaced by buildings following a proper lay-out. The second main artery westwards runs across the Mahmudia Canal from the point near the Tramway Power Station and thence across the railway, continuing westwards parallel to the coast and terminating in a "Place" in the centre of the Agami suburb. This avenue will be thirty metres wide (Plan No. 5). The suburb of Agami will be developed on garden city lines.

Reference to the General Plan (No. 4) will show what is proposed with regard to secondary streets and also the details of the lay-out generally. Special note might be made of the lay-out of the north part of Lake Hadra and the proposed access road to this area running under the railway and joining up with the existing Ramleh road, and also the continuation of this access road northwards across the present Sporting Club grounds.

It will be noted from the General Plan that twenty metres has been adopted as a minimum width for main streets and ten metres for secondary streets (Plan No. 5).

This completes a survey of the proposed principal avenues and streets which are considered necessary to meet the requirements of the city as it develops.

Transport.—The question of transport in a long narrow city like Alexandria is one of some importance. It is thought that the express traffic to Abukir and district will be borne by the State Railways line, which would be doubled and electrified. It seems likely that the motor omnibus will play a considerable part in the road transport of the future, and they will doubtless also act as feeders to the tramways and electric railways. The question of tramway extension has not been considered in detail, but it is thought that the town planning scheme will be found adaptable to future traffic development of whatever nature.

Parks and Open Spaces ("Places").—The provision of parks, gardens, and "Places" throughout the city and its suburbs has been studied and, where possible, the sites proposed to be reserved for these purposes are unbuilt areas or areas only partially occupied by buildings belonging to public Administrations.

It is essential for the well-being of the inhabitants of the city that the public gardens and open spaces should be situated within a reasonable distance of their homes and so distributed as to decrease the congestion of buildings and improve the aeration of the town.

One of the most interesting "Places" suggested is that at the west end of the proposed Râs el Tin avenue. It is designed to contain the mosques of Sidi Abu el Abbas, Sidi el Bussiri, and Sidi Yacout, and has an opening to the East Harbour. Plan No. 6 shows the proposal and Sketch No. 7 gives a view of the "Place" as it will appear when completed. When the existing buildings surrounding the mosques have been removed, it is suggested that all new buildings fronting the "Place" should be treated in the arabesque style and that special inducement might be given to proprietors to conform to this requirement by permitting them to build arcades over the public footpath. Photograph No. 23 shows a view of the Sidi el Bussiri mosque from the sea front.

Another interesting "Place" proposed is on the sea front at the East Harbour, containing the sites of the two obelisks which marked the entrance to the Caesareum of the Ptolemaic city. The proposed "Place" is situated at the extremity of Rue Missalla (Street of the Obelisks) and extends westwards from the Italian Consulate up to the prolongation of the Rue Nabi Daniel. Until last century one of the obelisks stood near the Italian Consulate, at the point shown on the Detail Plan No. 10, and the other lay on its side near the south-west corner of the proposed "Place" as indicated approximately on the plan referred to.

The former obelisk now stands on the Central Park, New York, and the latter is on the

Thames Embankment in London. It is suggested that the ancient sites of these columns might be suitably indicated on the ground meantime by obelisks or columns; and perhaps sometime in the future the original obelisks may find their way back to Alexandria. This pious hope is echoed by Dr. Breccia in his interesting historical note already referred to (Appendix I). The Sketch No. 11 gives a view of this proposed "Place," showing the obelisks on their sites marking the north entrance to the Caesareum, and Photograph No. 24, which is from an old print in the collection of Dr. A. Granville, C.M.G., C.B.E., shows the east-most obelisk in position. It is known that Queen Cleopatra ordered the building of the Caesareum and the erection of these obelisks. The area shown on the Plan No. 10 as a garden would provide an excellent site for a public building, if so desired at any time. It will be seen from the General Plan (No. 4) that the hill called Kôm el Nadûra, which is at present partly occupied as a Marine Observatory Station, has been reserved on the plan as a future park. This is a necessary reservation, for the hill is situated in a very much congested part of the town, in the heart of the commercial quarter. It will be noted that small "Places" are also proposed in this quarter surrounding the mosques of Sidi el Magaouri and El Hag Nazir.

A further reservation has been made for a public park in the industrial quarter at Kôm el Shugafa surrounding the site of the Catacombs. The ground now occupied by the Government Hospital at Mazarita is also shown as reserved for a future park, which will be a great embellishment to this part of the city, as it forms a continuation of the ring of south and north parks following the line of the old fortifications.

The site of the existing Cairo Station of the State Railways, which will be available when the new station is completed, is also indicated as a large "Place," in which might be erected a public building such as a municipal theatre (Plan No. 12 and Sketch No. 13). The building of the new station is an excellent opportunity to provide a "Place" worthy of the commercial capital of Egypt at this important point of arrival and departure, where a large open space for ceremonial purposes adds greatly to the dignity of a city.

Fortunately it has been possible to plan the "Place" practically without expropriation, and the surrounding Government land has been indicated as reserved for public buildings.

Throughout the city there are planned many small "Places" and gardens which might be created as opportunity arises.

It will be noted from the General Plan (No. 4) that the cemeteries at Chatby are to be screened on the east side from the residential area by a belt on which it is proposed to plant trees and shrubs.

The suburbs of the city having been planned on the more open lines of garden city development, the provision of numerous small "Places" and gardens is not so essential as in the city, and nothing of importance is proposed there. It will be noted from the General Plan (No. 4) that the large public park, consisting of the Nuzha and Antoniadis Gardens, is shown extended northwards to the line of the proposed avenue to Abukir. On the western portion of this area it is suggested that a sporting club be placed, as the site of the present Sporting Club will doubtless be required in the future for building sites. On the eastern portion of the area is shown an aerodrome, 800 metres square, which might be used as a civilian aerodrome for passenger, postal, and similar services in the future.

It will be observed from the General Plan (No. 4) that the headland of Râs el Tin to the west of the palace and also the headlands of Agami and Abukir have all been reserved as future public parks. Several sites have been reserved also for archaeological research, which will be referred to later, and such areas will doubtless be adapted in the future for use partly as public parks.

The question of the suitable selection of trees for "Places," gardens, and avenues, and the method of planting them, is an important one, and in this connection Monfront Bey, Director of the Municipal Parks and Plantations Service, has kindly written a note specially for this report (Appendix II), which indicates the results of his great experience in these matters.

The difficulty of finding a species of tree for use in positions exposed to strong sea winds appears to have been solved by the adoption of a palm tree called the *Washingtonia robusta* (*Pridchardia filifera*).

Cemeteries.—The existing cemeteries at Chatby will not serve the town for very much longer, and it has already been recognized as necessary to study the question of new cemeteries. The site which appears to be indicated for the purpose is on the high sandy land at

Sidi Bishr to the south of the railway station, as shown on the General Plan (No. 4), which would give an area of about 174 feddâns, including a surrounding belt of trees. This site has been examined and favourably reported upon by the Cemeteries Committee. No other suitable site nearer the city appears to be available.

Sites Reserved for Public Buildings.—On the General Plan (No. 4) have been shown the sites reserved for future public buildings, and these have been placed so far as possible on municipal or government land. The two plots on the front of the Eastern Harbour were reserved for Government buildings some years ago and on one of them the new Governorate and Government offices are about to be erected. Sites for public buildings have also been reserved at the proposed "Place de la Gare." The site for a new Government hospital, when the existing one is removed from Mazarita to form the proposed public park, has not yet been fixed, but possibly a site at Hadra might be suitable.

The Municipality has foreseen the need for public buildings such as a new museum, which might be placed in the North Park, and also a new library and pinacothèque, for which suitable sites can be found either in the North Park or on the proposed "Place des Obélisques" on the front at the Eastern Harbour. As the ex-Italian Boys' School, which was originally intended to be used as a library and pinacothèque, would require to be reconstructed for this purpose, the foregoing proposal has been made as an alternative.

The site for the proposed stadium in the South Park has been indicated, as well as a municipal theatre, which might be placed in the proposed "Place de la Gare" already referred to.

The site for the Infectious Diseases Hospital and Disinfecting Station, which will soon be erected at Hadra, has also been shown.

On the Government land at Kôm Hashem the site in shown of the proposed model dwellings for the "very poor" who will be displaced when the *échèches*, or slum dwellings, in the vicinity have been demolished.

When the present Museum, Library, and Pinacothèque situated behind the Municipal buildings have been removed, the Municipal offices, which are already found to be somewhat small for requirements, can be extended northwards. The buildings so included can be transformed into offices of ample dimensions for future needs.

Regulations.—The existing Tanzim and building regulations are very incomplete and in some parts require to be modified. With the object of meeting this defect and of giving the Municipality a more complete control over the erection of new buildings in the city, supplementary regulations have been approved, but have not yet been put into force. These new regulations contain all the necessary provisions for giving effect to the town planning scheme, such as the proper laying out of undeveloped or unbuilt areas, the width and alignment of streets and footpaths, the area of street surface in relation to the total area of the land, and also the area of the plot which may be covered by buildings and the height of the buildings themselves.

The alignments shown on the General Plan (No. 4) are the building lines. In the case of future wide avenues passing through partly built or partly developed areas in the suburbs, permission might be given to proprietors to make gardens in front of their houses, leaving a sufficient width of roadway for immediate purposes. When the land is eventually required for widening it would be handed over to the Municipality.

Zones (Industrial and Residential).—The regulations referred to provide that certain quarters and streets of the city may be reserved by the Municipality exclusively for residences, and it will not be permitted consequently to erect there industrial or commercial buildings. This is a matter which entails further detail study before any definite lines can be laid down. Generally speaking, however, the industrial and commercial quarter of the city will occupy a strip varying in width along each side of the Mahmudiya Canal between Minet el Bassal and the Canal Farkha and extending round the Western Harbour to the north and south.

Sites Reserved for Archaeological Research.—It will be seen from the General Plan (No. 4) that sites have been reserved for archaeological research. These have been asked for by the Municipal Antiquities Service and include the two large areas at Abukir on the sites of the ancient cities of Canopus and Menouthis, and there are also small areas at

Chatby, at Anfushy, and at Fort Kaid Bey (the ancient Pharos). Ample space has been reserved round Pompey's Pillar and the Catacombs at Kôm el Shugafa (Photo No. 19).

Historic Buildings.—There appears to be no historic buildings of Arab or other origin which are considered worthy of preservation in the city. It was proposed that the old Governorate should be preserved, but an examination has proved it to be too much decayed.

The historic fort at Kaid Bey, the site of the ancient Pharos, should be preserved from further decay. The walls on the sea side have suffered much from the storms in recent years and considerable erosion is continually going on. A comparatively small sum spent annually on repairs would preserve this interesting and picturesque building, which provides a fitting terminal to the fine sweeping promenade round the Eastern Harbour and is an excellent point from which to view the city. The building might be adapted at a future date to some public purpose (Photo No. 15).

Quay Lands.—It will be noted that under the town planning scheme the following plots on the reclaimed quay lands are proposed to be reserved: Plots Nos. VI, 3 and 4, and No. V, 5, 6, 7, and 8, for the "Place des Mosquées"; Plots Nos. XIII, 1, 2, 3, 4, 5, and 6, for the Râs el Tin Canal; Plots Nos. XXIII, 1, 2, 3, 4, 5, and 6, for the "Place des Obélisques."

Municipal Housing Scheme.—The scheme for building small houses to accommodate the "very poor" has already been referred to. These houses are required to replace the *échèches* or slum dwellings, which are recognized to be centres of infection in the city. There are several colonies of poor people who inhabit these *échèches* distributed throughout the city and suburbs, and it is the aim of the Municipality that these shall be removed as early as possible and that no others shall be allowed to grow up. One of these *échèches* is shown on Photograph No. 21. Many of the colonies are situated on private land, and it is difficult for the Municipality to deal with these, but it is thought that if a commencement were made by building a municipal model colony near one of the largest *échèches* in the heart of the city now being demolished, it would be a great step towards the solution of the question. This problem is similar to that of slum areas with which European cities have to deal. The people who inhabit these *échèches* cannot, in most cases, afford to pay an economic rent for properly built houses. Plan No. 14 shows a unit of a hundred houses which the Municipality proposes to erect, and these units may be multiplied as required. It will be seen from the plan that each house consists of a room and a courtyard, or practically two rooms, and that each hundred houses has a complete sanitary installation, including wash-houses.

Mahmudiya Canal Port.—The scheme for the extension of the port at the Mahmudia Canal (Photo No. 27), which has been approved, includes quays or wharves of various types extending along both banks eastwards as far as the Farkha Canal. Plan No. 5 shows the principal type sections of quays proposed.

Râs el Tin Canal (Proposed).—Plans Nos. 5 and 9 show details of the proposed canal between the East and West Harbours, which will re-establish the connection which existed in Ptolemaic times. The canal will provide a passage for fishing boats and small craft, and it will doubtless improve the circulation of water in the harbours. The canal will be twenty metres wide, spanned by five opening bridges and flanked by streets fifteen metres wide.

Municipal Boundaries.—It will be seen from the General Plan (No. 4) that this town planning scheme extends beyond the present municipal limits, and if it is approved it will be necessary to have these limits extended in the future.

Programme of the Scheme.—Following upon the approval of this town planning scheme it is suggested that the principal proposed avenues, streets, and open spaces be decreed and that plans for this purpose to a scale of say 1:1,000 be immediately prepared. The detail plans of the whole area proposed to be laid out would be made gradually as required, the developed or partially developed areas being naturally taken first. In preparing all these plans it may be found necessary to modify in detail what is shown

on the General Plan of the scheme, for it should be understood that this General Plan is more or less the key plan of the whole scheme, and gives a programme, in the form of a diagram, for the improvement of the existing city and the development of the future city on approved lines. It is difficult to make such a plan or scheme absolutely comprehensive and complete in detail, even after years of study, but it is thought that this scheme has now reached such a stage that it may be submitted for approval.

Expenditure (Annual).—The annual expenditure entailed by the town planning scheme will depend upon the speed with which improvements are desired to be carried out and the rate of development or growth of the city. The adoption of the scheme does not necessarily entail a greater annual expenditure than is incurred at present.

It is to be noted that the cost of expropriation for wide avenues and "places" is largely compensated for by the increased value of the new frontages. This is taken into account in fixing the sum to be paid for expropriation.

Concluding Remarks.—It is hoped that the foregoing brief descriptive note, which has been made as non-technical as possible, will give an idea of the meaning and scope of this town planning scheme and also of what may be achieved by the aid of its provisions.

The great majority of large cities have not as yet been completely town planned, but a rapid advance in recent years in the matter of town planning is evident by the large number of schemes in course of preparation throughout the world. In ancient times the city of Alexandria was never equalled for its far-reaching effects on the civilization of the world, and the progressive tendencies of the Alexandria of to-day will not allow it to remain behind other important cities in matters affecting its future development.

This town planning scheme has been prepared in the time which could be spared from the routine of a busy office and without the aid of special staff, and it is regretted that it has not been possible to present the project in a more complete form. It is felt, however, that the essential work being now complete, any delay in presenting the scheme is undesirable, for its provisions are urgently required to guide the development of the city and to assure that opportunities for its improvement are not lost, such as, for example, the proposed "Place de la Gare." The building regulations which have now been approved will greatly aid the realization of the ideals envisaged by the scheme.

In conclusion the author desires to make his acknowledgements to all who have assisted him in the preparation of the Town Planning Scheme and for the suggestions, ideas, and criticisms so kindly offered, special acknowledgement being due to H.H. the Sultan for His great interest and encouragement in the work; also to the Vice-President, the Director-General, and to many of the Members of the Municipal Commission, and also the heads of Government Departments who have been consulted; and finally to the Curator of the Municipal Museum, the Director of Parks and Plantations, and the staff of the Technical Service.

W. H. McLEAN, M.Inst.C.E.,
Engineer-in-Chief, Alexandria Municipality.

Alexandria, November 1920.

APPENDIX I.

Historical Note on the City of Alexandria.

By Dr. E. BRUCCIA, Curator of Alexandria Municipal Museum.

THE ANCIENT CITY.

Topographical Sketch.—Soon after the conquest of Egypt (332–331 B.C.) Alexander, having made himself master of Memphis and advancing along the coast towards the Oasis of Ammon, was so struck by the excellent position offered by the village of Rhakotis, fronted by the island of Pharos, that he took the decision to found a great town: Alexandria. The plans were traced by the architect Dinocrates. At the conqueror's death (322) the building of the new town was not very much advanced, and it was not until the reign of Ptolemy II (285–246) that Alexandria, ceasing to be a building-yard, became the city whose beauty excited the admiration of the ancient world.

All the kings of the Ptolemaic dynasty and also many Roman emperors have contributed to the embellishment of the town.

Unfortunately, as far as the complete destruction of its edifices and the uncertainty of its topography are concerned, Alexandria takes precedence over every other great city of the ancient world. In spite of its enormous literary productions, written traditions as to its buildings are either rare or very vague; though we know of a good number of temples, palaces and monuments, it is almost always impossible to identify them in a precise manner or to indicate their exact sites.*

We are able to gather a broad idea of the general aspect of the town, and an approximate idea, or bird's eye view from Strabo's celebrated description, or from the details contained either in the Romance of Alexander by pseudo-Callisthenes or in the Amours of Leucippe and Clitophon by Achilles Tatius, as well as from occasional notices met with in the works of many of the historians of the Greco-Roman and Christian periods.

General Description.—At the time of Alexander the Great and his successors, architecture had a great and very important task to accomplish in the construction of hundreds of new cities. This task was achieved in an admirable manner, according to the rules already fixed in the fifth century by Hippodamus of Miletus, which rules had been followed in the transformation of Rhodes and of Halicarnassus. Dinocrates designed the plan for Alexandria. The principal characteristic of this plan was the predominance of straight lines.

Modern architecture, at any rate the most recent, is inclined the other way, and it may be right, but at the Hellenistic epoch the principle of the straight line was considered excellent. Alexandria became a model for most of the large new cities. As a rule, the streets cut one another at right angles, in such a manner that the groups of houses resembled a chess-board.

The two principal streets which intersected almost in the centre of the city were more than 100 feet (30 metres) wide. Many canals and aqueducts passed under the streets. The five districts comprising the town were indicated by the first five letters of the alphabet, which moreover agreed with the first five numbers.

From the time of its foundation Alexandria had a surrounding wall the maximum length of which might be reckoned at about fifteen kilometres. This wall was fortified by towers placed at short distances apart. The course of the walls of the north-eastern side followed the line of the coast as far as Cape Lochias, and then turned towards the canal.

As a result of the construction of the Heptastadium, two harbours were formed: the Eastern Harbour (Μέγας Λιμὴν) (*magnus portus*), which was considered the most important of the two by ancient Alexandrians, and Port Eunostos, our modern western Harbour.

* "In this same Alexandria, where so many things have happened, we are not often able to localize its memories." Perdizet, B. C. H., 1912, p. 257.

Two openings were made in the Heptastadium in order to facilitate direct and rapid communication between the two ports. These openings were placed near the extremities of the dyke. They were crossed by bridges supported on high columns, and at the time of Caesar, at any rate, were guarded by two forts.

The *Magnus Portus*, the entrance to which it seems was very difficult, was surrounded by superb edifices. A jetty starting from Cape Lochias protected the port from northerly winds and currents, whilst on the opposite side the Pharos Island offered natural protection. At the extremity of this island, quite close to the entrance of the port, the lighthouse was erected, taking its name from that of the island (Pharos). In the middle of the harbour, towards the south-east, there was an island, called Antirrhodos, probably on account of its shape. On a perfectly calm day, it is still possible to perceive its shape under the water. A royal palace stood on this island, and close by the promontory of Cape Lochias there was a small inner harbour reserved for the private use of the royal family.

A jetty was built out into the harbour almost in front of the present Ramleh Station, and at the end of this promontory Mark Antony had the Timonium built, a sort of philosophical hermitage to which he retreated from time to time. From the later Imperial epoch Port Eunostos (Western Harbour) became more frequented, whilst the large harbour was more and more deserted. The entrance of the former was near the western point of the Pharos Island (Rās el Tin), on which there was a temple to Poseidon.

Inside the Eunostos there was a small artificial harbour enclosed on all sides called ἡ κιβωτός, the box or the coffer. A navigable canal connected it with Lake Mareotis.

The canal which supplied Alexandria with fresh water and constituted the commercial highway with the interior of the country had its head on the Canopic branch of the Nile at Schedia, about twenty-seven kilometres from Alexandria. This canal must have followed very closely the direction of the present Mahmudiya Canal. Not far from Hagar el Nawatiya it separated into two branches, one of which went towards Canopus, parallel with the coast, and the other to Alexandria.

The drinking water used by the town was drawn almost entirely from the canal, and stored up in numberless underground cisterns. These cisterns were supplied by underground canals connected with the branch of the river. There were also numerous isolated cisterns, some of which were filled by means of machines placed over large wells connected with the nearest branch of an underground canal, whilst others may also have been supplied with rain water in the winter.

According to the configuration of the ground on which Alexandria was built, the cemeteries must inevitably have lain to the eastward and westward of the town. Strabo speaks of a town of the dead, the western suburb, the νεκρόπολις, a word which nowadays designates any huge hypogeum, any vast cemetery, but which originally was used only for the collection of cemeteries situated to the west of Alexandria.

It was only at the close of the Ptolemaic epoch that the centre of habitation known under the name of Nikopolis grew up on the shores of the sea, about thirty stadia distant from Alexandria. This suburb was almost as important as a town in Strabo's time. The Emperor Augustus did a great deal to improve this locality, which he must have called Nikopolis in memory of his victory over Mark Antony. Nikopolis must have been on the site of Bulkeley of the present time, spread over the hillocks on the seashore, between Mustapha Pasha and Glymenopoulo. Three columns and other remains belonging to a small tetrastyle temple of the Doric order were standing some years ago on a small promontory jutting out into the sea at this portion of the coast.

The στρατόπεδον, or quarters for the Roman Legion in garrison in Alexandria (*Castra Romanorum*) was near the sea at Mustapha Pasha, on the spot where the barracks of the British army exist to-day. The Roman Camp remained in a fairly good condition until 1875. Its baths might be seen and its pretorium and a superb mosaic pavement, the centre of which was decorated with a Bacchus holding a bunch of grapes and a thyrsus.

On the high ground at Ibrahimiya there would be no important centres of population, but numerous villas (Eleusis on the sea) and also groups of the tombs, the earliest of them dating back to the dawn of the Ptolemaic epoch. It must have been at Ibrahimiya, according to Neroutsos' map, that a tomb with a cupola was found in 1880, which contained in several rows of niches the cinerary urns of the numerous mercenaries serving under the Lagides, as well as the urns of the ambassadors to the religious festivals from the various Greek towns. Some of these urns, dating from the third century B.C., are preserved at present in the Municipal Museum. Somewhat further inland there existed the important suburb which, according to Strabo, drew its name from the hippodrome.

To the west of the present Lake Hadra, in the middle of the nineteenth century, two green granite colossal statues of Mark Antony as Osiris, and Cleopatra as Isis, were brought to the light of day.

To the west of the district called Camp Caesar, between the tram line and the bathing establishment, at Chatby, there lies the most ancient and the most extensive Greek necropolis in Alexandria.

At the west end of the esplanade of Chatby an extraordinary number of the shafts of red granite columns were discovered. This was probably the spot where the royal quarters began. "On entering the large harbour, the island with the Pharos tower is on the right hand and on the left a group of rocks and Cape Lokias crowned by a palace on its summit. As the ship advances a view is gained of the palaces behind the cape, surrounded by numerous residences as well as gardens." (Strabo.)

The outline of Cape Lochias has changed a great deal since the olden days. One might even say that the cape had almost disappeared under the waves, to such an extent that the entry into the harbour, which was formerly very narrow, has now become so extremely wide as to oblige the modern town to undertake the construction of a breakwater to protect its quays. This breakwater, when completed, will follow very closely the line of the ancient cape and of the jetty which terminated it. It is quite evident that we are obliged to imagine the area of the ancient cape as much larger than it is in these days. The small harbour reserved for the private use of the kings was formed by the bend at the base of Lochias in front of the island of Antirrhodos.

Τὸ ἐνδοτέρω βασιλεία mentioned by Strabo, must have extended from the Lochias as far as the Rue Yussef Ez Eddine, near Said Square. Besides the discovery of an enormous number of shafts of columns to the eastward of the municipal stables, the operation of levelling the land (which was carried to a level well above that of the ancient surface), brought to light many antiquities quite worthy of notice.

On the west these buildings must have been next to the meandre and the palestre, which two edifices were situated along Rue Yussef Ez Eddine to the north and north-east of the Government Hospital. The theatre occupied the next place, for according to Strabo it was almost in front of the island of Antirrhodos. We shall not be far from the truth if we place it on, or rather below, the small hill at present occupied by the native Hospital. The ground is strewn with numbers of shafts of columns, and walls of considerable thickness can be seen, made of blocks of limestone. The trench that was made for the drainage of Rue Yussef Ez Eddine brought to light the remains of several rooms, also a quantity of rectangular and well-hewn limestone blocks. One of the rooms contained a mosaic of small polychrome pebbles—no doubt Hellenistic—portraying a fighting warrior.

"Next to the theatre comes the posidium, a promontory jutting out into the sea at the spot called emporium, and which has a temple to Poseidon" (Strabo). It seems that we ought to locate the emporium to the north east of the Maison Antoniadis. The promontory and the temple of Neptune were situated a little to the west of the British Consulate. From time to time a great number of antiquities have been discovered at this spot. A ruin built of blocks of limestone and baked bricks and dating from the Roman epoch (now demolished), had been called by travellers and the natives "Cleopatra's palace or baths." This building occupied a rectangular area measuring some 150 square metres. It had two floors, the lower being hewn out of the rock. This edifice, in fact, did resemble a bathing establishment, for there were numerous traces of furnaces on the bottom floor, while on the upper storey there was a tiled pavement of a basin or bath over the furnaces and there were also pipes which led towards this bath.

Hot-baths were very numerous in Alexandria. These establishments, enriched with works of art, took their names from the statues which decorated them; one would be called Ἰδωίς (name of a nymph), another ὁ ἵππος (the horse), a third ἡ ὑγίεια (the goddess of health, a fourth ὁ κάβυρρος (the scarab).

The Caesareum is one of the few buildings of ancient Alexandria that can be located with certainty. We have the datum in Cleopatra's Needles, the two obelisks which were in their places until the middle of the nineteenth century. At the same time, however, we are unable to determine either the limits or the area of this celebrated temple. Some foundations brought to light in 1874, between Rue Nabi Daniel and the Obelisk, were considered by Neroutsos as belonging to the Caesareum. Taking into account the great extent the temple is said to have occupied, there can be no reason to disagree with those who think that it lay between the Maison Yehia, the Catholic Coptic Cathedral, and the Jewish Synagogue.

Pliny has made known to us the existence of two obelisks in the enclosure of the Caesareum. They came from the temple of Heliopolis and bear the cartouches of Thoutmes III, of Ramses II, and of Seti II. As far back as the middle ages one of these obelisks had fallen down. This was the one which was given to England by Mohamed Aly, but it was not transported to the Thames until 1877. The other, granted to the United States in 1879, is at present in the Central Park, New York*.

Is it an absurdity to hope that these obelisks may ultimately return, in view of the conception that the historical value of monuments is increased by being kept in the place where they were discovered?

Along the coast-line beyond the Caesareum and the emporium, which was a sort of commercial exchange (to the north-east of the Maison Antoniadis) were placed the apostases. These were shops or depots, and extended between the present Maison Antoniadis and Rue Centrale. In this quarter the temple of the Thracian goddess Bendis was probably situated (Bendition). Here also the Arsinoëion must have stood. An inscription informs us, too, that there was a temple dedicated to Aphrodite not far from this spot. The Arsinoëion was a superb edifice, vaulted with elliptical arches. It appears that the sema as well as the principal temple of Isis was also carried out in this style of architecture.

We know that the museum and the library were included in the royal quarter. Consequently they would be situated to the southward of the buildings already enumerated, that is to say, to the south of the royal palaces, of the theatre, and of the Caesareum.

On the other hand, the foundations of a temple dedicated to Isis and Osorapis, erected during the reign of Ptolemy IV Philopator, were discovered under the Toussoun Exchange (the Mohamed Ali Club, Cook's Agency, and Italian Club). The museum, then, ought to lie to the north and the east of this spot so that both the museum and the library must have been situated between Rues Nabi Daniel, Fouad I^{er}, Cheriff Pacha, and the ancient apostases, shops, or depots standing on the quay.

This zone is contiguous to the most central and most important part of the ancient town. "Between the present Jewish Synagogue and the Zizinia Theatre, in 1880, while clearing the ground intended for the new Greek Hospital, there were discovered, besides the massive foundations of some antique building that had disappeared, the pavement of a spacious peristyle with some twenty broken columns of porphyry. Between these columns there were the remains of marble pedestals of statues of the time of the emperors of the third century, as well as statues of high functionaries" (Neroutsos).

Neroutsos identifies this edifice with the palace of Hadrian called the *Licinium* in the times of Epiphanes, who places it near the Caesareum. The *Tycheum* ought also to be somewhere near this spot; in this building the bronze tablets were kept on which the laws were engraved. To the south of this, under the Zizinia Theatre, several marble statues were discovered, and amongst others a colossal statue of Marcus Aurelius.

A large marble pedestal of the Hellenistic epoch was drawn from under the foundation of the house in front of the old Zizinia Theatre (Maison Lifonti). This pedestal had been turned over to be used as a base for a statue of the emperor Valentinian, which statue had been erected by a *comes ordinis prime ac per orientem*. Other statues were discovered under the German Consulate. The Hellenistic statue in white marble, representing Hercules resting, now in the Museum, was found on the site of a neighbouring house.

The centre of the ancient town was probably at this spot, and it is here that we ought to place the point of intersection of the two chief streets, the longitudinal (or Canopic) and the street that crossed it. The *forum Augusti* and the *tetrapylon* should also be in close proximity. The tomb of Alexander the Great is usually placed under this same spot, on the site occupied by the Mosque Nabi Daniel. Alexander had expressed the wish to be buried in the oasis of Jupiter Ammon, but Pholemy I stopped the splendid convoy that was transporting the body of the conqueror at Memphis, and carried out the burial according to the *Macedonian custom*, that is to say, in a sarcophagus shaped like a bed. Certain tombs discovered at Alexandria (Chatby, Anfushy, and Sidi Gaber) dating from the beginning of the Hellenistic age, give a general idea of the funerary temple and the sarcophagus which contained the remains of the conqueror. There is usually an uncovered atrium or square courtyard, from which entrance is gained to a room for

* Comp. H. Corringe, "Egyptian Obelisks," London, 1885.

lamentations or prayers, and at the end of this room is the *cella* with the bed-shaped sarcophagus.

When one remembers the dignity of the person, and his quality as a god, one can imagine what must have been the richness of the decoration and the funeral furniture of the tomb of Alexander.

Ptolemy II Philadelphos wished to make Alexander's tomb one of the most important centres of Egypt's new capital, and he transferred the body to Alexandria. The tomb was placed in an enclosure, its limits marked and separated from the rest of the town by a wall (*περιβολος*). The sepulchre itself, consisting of an entrance stairway, a square court, a long vestibule, and of the *cella* which contained the bed-like sarcophagus, must, it is thought, have been underground.

A temple intended for the ceremonies of worship, and probably surrounded by porticoes, would be built above the sepulchre. At a later date the kings and princes of the Ptolemaic families would be interred in special tombs around the founder of the city.

We are unable to say whether these latter preferred cremation to burial or mummification. According to a passage by Polybius, however, we hear of silver funerary urns containing the ashes of Ptolemy IV and his wife Arsinoë, whereas, by way of contrast, Dion Cassius tells us that Cleopatra was embalmed.

Not far from the tomb of Alexander, Philadelphos had the tomb of his parents erected, Ptolemy I and Berenice. The *θεῶν ἀδελφῶν τέμενος*, or the *enclosure of the brother gods*, was probably the sepulchral enclosure that Philadelphos caused to be built for his sister and wife, Arsinoë, and for himself. It seems that Philopator wished to unite in one single and large mausoleum all his ancestors, including Alexander. By the side of this collective mausoleum there would rise, one after the other, the various mausoleums belonging to the successors of Philopator. The tomb of Cleopatra and Anthony would not be very far from this spot. It would be in the royal quarter, and very likely near the temple of Isis Plousia, that is to say, somewhere at the north side of Rue Nabi Daniel. "The gymnasium is the handsomest edifice, its portices are more than a stadium in length." Shortly afterwards Strabo adds that the broad longitudinal street extends from the necropolis to the Canopic gate, *passing along by the gymnasium*.

This seems to show that we ought to locate this vast edifice in the eastern section of the Canopic street, to the north-east of the Kôm el Dick quarter. It was in the gymnasium that the great ceremony took place at which Mark Anthony, in the midst of an immense crowd, proclaimed Cleopatra *Queen of Sovereigns* and distributed a considerable portion of the heritage of Alexander the Great between the Queen and the sons that she had had by Caesar and by Mark Anthony himself.

The Tribunal τὸ δικαστήριον is mentioned by Strabo after the Gymnasium, and he places it at the centre of the town. It is thought that it was situated near the Zizinia Theatre. Probably the *σεβαστὴ ἀγορὰ*, or *forum Augusti* of the Roman epoch, is none other than the δικαστήριον of the Ptolemaic age.

Next to the Tribunal, Strabo speaks of the Paneum, a small artificial mound in the form of a top or fir-cone; a spiral stair led up to its summit, whence might be seen a panorama of the whole town. We must picture this spot as dedicated to the god Pan, the enclosure being a magnificent park, surrounded by woods and thickets. Archaeologists agree in identifying the Paneum with the hillock Kôm el Dick.

Thiersch has tried to prove that the Paneum was nothing but a mausoleum for the Ptolemies. This mausoleum was the model for Hadrian's mausoleum (Castle of St. Angelo) in Rome. However, Strabo's silence in this case is inexplicable.

To the north of the Rue Fouad I^{er} and between it and the Boulevard Sultan Hussein, literary tradition mentions no edifice of any importance, but as this zone lay along the Canopic road it must have contained some of the temples and magnificent houses which bordered this great longitudinal street, according to Diodorus. One should mention here that in Rue Antoine there had been discovered, amongst others, the base of a statue that Ptolemy III had erected in honour of his physician. In Rue Gerbel a statue of a great personage of the court of the Ptolemies has been brought to light; and in the grounds of the Menascé Schools there was uncovered the great syenite column now standing in Place Saïd. Along Rue Ptolemy, in front of the Villa Salvago, there were found numbers of marble columns of considerable size and engraved with Christian symbols.

Somewhat further on, at the Alfred Menascé property, in the Rue Fouad I^{er}, an enormous red-granite column was discovered, also a marble head of Alexander the Great.

Below the Municipality, Neroutsos places a temple to Saturn. The ground traversed by the eastern section of Rue Fouad I^{er} as far as the European cemeteries ought to contain a fair number of buildings and antiquities.

The quarter Δ, chiefly given up to Jewish residence, was contiguous to the Regia, and consequently should extend to the north of the Rosetta gate in the vicinity of the Mohamed Ali Industrial Schools.

The temple of Nemesis ought to lie between this spot and the European cemeteries, because Applanus records that Caesar had Pompey's head buried near the walls of Alexandria and that the spot where this took place was afterwards called Nemesion, "enclosure dedicated to Nemesis." The Nemesion lasted until the days of Trajan, when it was destroyed in a revolt of the Jews, they having barricaded themselves within it. We must therefore believe that the Nemesion was close to the Jewish quarter.

In the Latin cemetery the light of day has fallen on the doorway and very thick alabaster walls of an apartment which marks the site of an important edifice. Unfortunately, the parts that are visible bear no inscription, and also it was impossible for us to push our researches any further for fear of encroaching on the modern tombs of the Greek and Latin cemeteries.

To the south of Kôm el Dick, on the site now occupied by the Moharrem Bey quarter, ancient writings make no mention of any public buildings.

In Rue Menasse, an inscription in honour of the emperor Trajan was discovered; it is supposed that it belonged to a triumphal arch. Capitals of pillars are often found of various proportions, also shafts of columns, and mosaics.

Let us now go back to the western section of the ancient Canopic road (the part between Toussoun Exchange and the Labbân quarter). It was in the Attarîn Mosque that the French Mission discovered the superb green granite sarcophagus at present in the British Museum, and which was thought might be Alexander's sarcophagus. It has since been shown that it contained the body of King Amyrteos of the XXVIIIth dynasty.

The colossal porphyry statue, now in the Municipal Museum (Room XVII), was found in 1870, almost in front of the mosque at its south side. In this same spot at the time of the French Expedition there were still standing the shafts of three monolith columns of porphyry.

On the land belonging to the Armenian community, shafts of columns and of double columns may be seen. In the Guinena quarter, behind the Labbân police station, a porphyry cover of a sarcophagus was found. It is at present in the Municipal Museum, and it is almost identical with the cover of the sarcophagus of St. Constantius, exhibited at the Vatican. Rather further on, in the Rue Bochtori, a limestone column was discovered with a bilingual inscription (Latin and Greek) referring to the canal which the emperor Augustus caused to be made from Schedia to Alexandria. To the south-west of this spot, on the site of the convent of the Franciscan Sisters and of the Church of St. Francis of Assisi, there was the so-called mosque of the *Thousand Pillars*. This inscription, even though it be hyperbolic, clearly indicates the size and importance of the edifice. Before the Arab conquest it was a church dedicated to St. Mary, but more usually known under the name of the Church of Theonas.

This celebrated mosque was partly ruined during the war which followed the French Occupation in 1798.

According to pseudo-Callisthenes the territory chosen for the new capital of Egypt was peopled with numerous villages. This information is not improbable, but it is beyond doubt that the only village of any importance was that of *Rhakotis*. This was situated on the rising ground that to-day is occupied by the ruins of the Serapeum and by the Kôm el Shugâfa quarter. The population consisted of soldiers who were deputed to guard the coast and shepherds. Strabo tells us the surrounding country was used as pasture-land. This original source of the native population was increased by the transfer of some of the inhabitants from Canopus. The earliest mention of this hamlet is found in a hieroglyphic inscription dated 311 B.C. This inscription, engraved under the auspices of a priestly college, is in honour of the satrap Ptolemy, "who chose as his residence the fortress of King Alexander, as it is called, on the shore of the Ionian Sea, a place hitherto known as *Rhakotis*." Strabo says *Rakhotis* now formed that portion of Alexandria situated beyond the naval work-yards. The native quarter of the new capital of Egypt grew up around this ancient village. It corresponds to the present quarter of Kôm el Shugâfa and its environs, the very district which up to our own days has remained *par excellence* the native quarter.

On the small hill where the temple of Serapis was built later there must have stood a sanctuary dedicated to some Egyptian gods. Apart from the superb and celebrated Serapeum, this part of the town, the wealth and beauty of which might bear comparison with that of the capitol, possessed many large edifices. The Anubion was placed quite near the Serapeum (we gather this from a recently discovered hieroglyphic inscription). The Anubion was a temple dedicated to Anubis and had a burial ground for sacred animals. To the south-west of the Serapeum, between it and the small hill of Kôm el Shugâfa, the savants of the French Expedition beheld and uncovered a *stadium*. The immense and extremely ancient Arab cemetery which spreads to the north of the so-called Pompey's Pillar (Serapeum) hides, no doubt, important antiquities.

Towards the close of the first century B.C. the town extended a little to the west up to the canal which connected Kibotos to the Mareotis. "Immediately after came the Necropolis, a suburb covered with gardens, tombs, and with establishments for the embalming of the dead" (Strabo, XVII, 795). This town of the dead extended from Gabbari to Mex.

APPENDIX II.

Note on Tree Planting in the Streets of Alexandria.

By L. MONFRONT Bey, Director of Parks and Plantations, Alexandria Municipality.

This note deals with the kinds of trees most suitable for planting in the streets and avenues of Alexandria and its suburbs.

(1) For the zone close to the sea the tree most suitable is the *Washingtonia robusta* (*Prädchardia filifera*). This palm is very hardy and stands the strong sea winds.

The *Tamarix* also resists well and is not affected by salty soil. Its only inconvenience is that owing to the violence of the wind, which blows almost continually from the sea, it is difficult if not impossible to get it to grow straight.

A plant which it is thought ought to give good results in places where the pathways are broad is the *Araucaria excelsa* which would form magnificent avenues of a fine aspect.

(2) For the second zone, extending one or two kilometres from the sea towards the interior, the kinds of trees most suitable are : *Schimus terebentifolia*, *Ficus laurifolia*, *Ficus bengalensis*, *Phoenix canariensis*.

(3) For zones further inland all the above mentioned trees may be used, bearing in mind, however, the direction of the streets and especially the width of the pathways. For roads possessing pathways at least four metres wide one should plant *Ficus nitida*, *Ficus elastica*, *Ficus infectoria*, *Ficus religiosa*, *Ficus amazonica*, *Poinciana regia*, and *Jacaranda mimosaefolia*.

These trees, to produce the best aspect, require plenty of space to develop freely their large crowns which form magnificent verdant domes.

For roads with narrow pathways one should utilize *Schimus molle*, *Bauhinia*, *Técoma stans*, *Cytharexylon quadrangularis*, *Catalpa*.

In places where the subsoil water is low, i.e. at least one and a half metres from the ground, one should plant preferably Oriental platans or *Populus fastigiata*.

Distances between the Trees.

	Metres.		Metres.
<i>Pridchardia filifera</i>	6	<i>Ficus infectoria</i>	12
<i>Phoenix canariensis</i>	6	<i>Ficus macrophylla</i>	12
<i>Tamarix</i>	10	<i>Poinciana regia</i>	12
<i>Araucaria</i>	12	<i>Jacaranda mimosaefolia</i>	8-10
<i>Schimus terebentifolia</i>	10	<i>Schimus molle</i>	8
<i>Ficus laurifolia</i>	8	<i>Bauhinia variabilis</i>	8
<i>Ficus bengalensis</i>	12	<i>Técoma stans</i>	8
<i>Ficus nitida</i> (according to the quality of the soil)	12-14	<i>Cytharexylon quadrangularis</i>	8
<i>Ficus elastica</i>	12	<i>Catalpa syringifolia</i>	8
<i>Ficus amazonica</i>	10	<i>Populus fastigiata</i>	8
		<i>Oriental platans</i>	12

APPENDIX III.

Decision of the Municipal Commission of Alexandria of June 15, 1921, approving the Town Planning Scheme.

(Translation.)

The Municipal Commission formally approves the City of Alexandria Town Planning Scheme submitted by Mr. W. H. McLean, M. Inst. C.E., Engineer-in-Chief of the Municipality. This approval is specially meant to signify the adoption of a programme in its main lines, which will be carried out gradually as the possibilities and requirements arise.

This scheme will constitute, in other words, a general guide for the future and is subject eventually to any modifications which may be deemed useful.

The Commission congratulates Mr. McLean, and the staff who assisted him, on this remarkable work.

APPENDIX IV.

Approval of the Scheme by the Ministry of the Interior.

(Translation.)

MINISTRY OF THE INTERIOR,

Cairo, July 12, 1921.

No. 9. 1/84.

SIR,

With reference to your letter of June 22, 1921, I have the honour to inform you that I have no objection to approve the decision of the Municipal Commission at its meeting of June 15, 1921, to adopt the Town Planning Scheme for the City of Alexandria.

It is necessary, however, to consider that the above approval is given without any prejudice to the boundaries or other dispositions concerning the City of Alexandria which will be embodied in the Decree, at present under study, relative to the extension of the Municipal perimeter of your town and also without any prejudice to any regulations at present existing or which may come into existence in matters regarding public streets or other matters.

I have the honour to be,

Sir,

Your obedient servant,

(Signed): A. SAROIT,
Minister of Interior.

TO THE PRESIDENT

OF THE ALEXANDRIA MUNICIPALITY.

APPENDIX IV.

List of Members of the Municipal Commission of Alexandria during 1921, when the Scheme was approved.

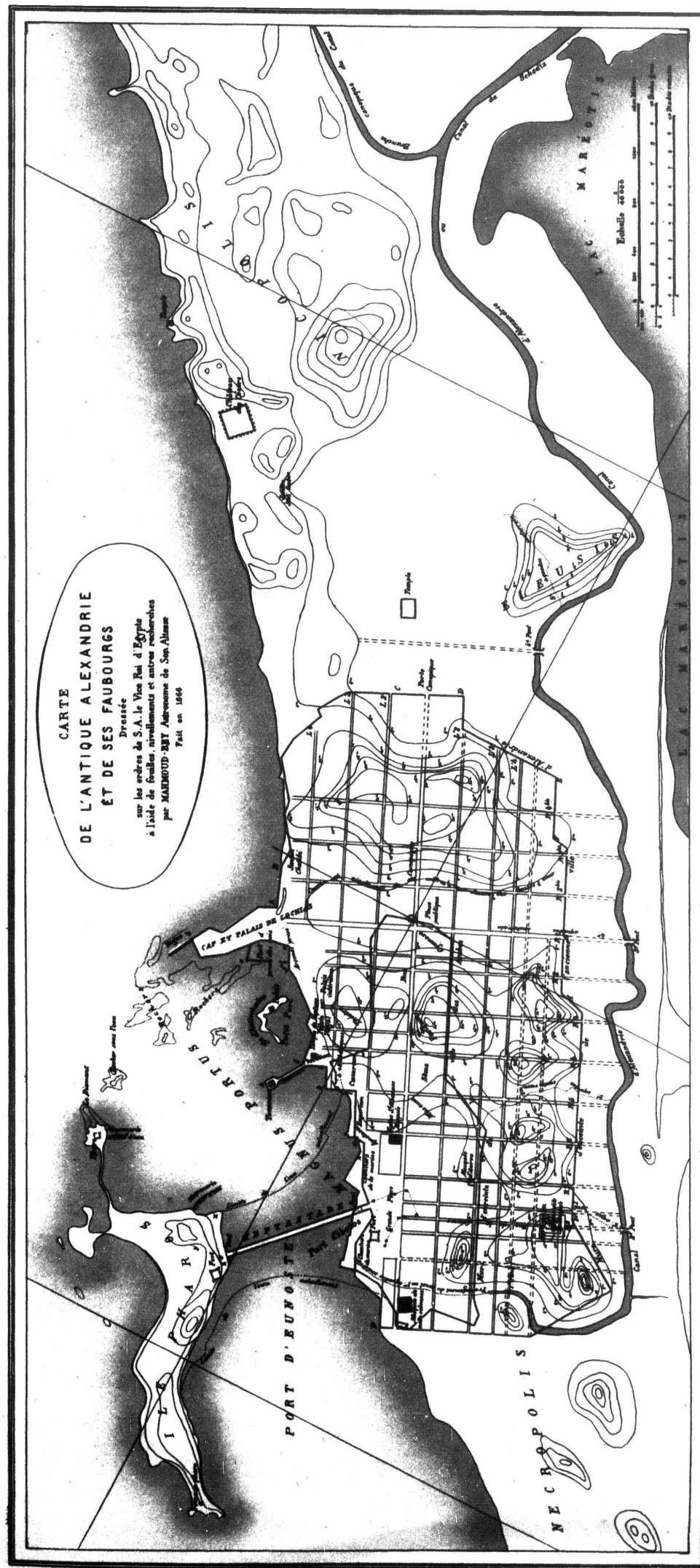
H.E. Mohamed Heddaya Pacha, C.B.E., Governor of Alexandria, President.

Dr. Alex. Granville, C.M.G., C.B.E., Vice-President.

MM. H.E. Abdalla Pasha El Ghériani.	MM. O. Lanzetta.
„ Abdel Aziz Bey El Heddéni.	„ F. Leveaux.
„ Auguste Alby.	„ Alfred Lian.
„ Ant. Arcache Bey.	„ T. C. Macaulay, M.C.
„ J. Barbaza.	„ Mahmoud Bey Margouchy.
„ C. R. Bawden, M.B.E.	„ H.E. Mansour Pasha Youssef.
„ F. Van Den Bosch.	„ Mohamed Fahmy Bey Nadouri.
„ N. Caravia.	„ N. G. Nicolaou.
„ Herbert Carver.	„ N. Paraskéva.
„ Const. J. Chorémi.	„ Ramadan Bey Youssef.
„ H. Demirgian Bey.	„ Elie Shama.
„ H.E. Emine Pasha Yehia.	„ H.E. Dr. G. Valensin Pasha.
„ L. H. Rickards.	„ E. Vermond.

H.E. H. H. Hopkinson Pasha, C.M.G., C.B.E., Director-General.

Govt. Press 8142-1920-200 ex.

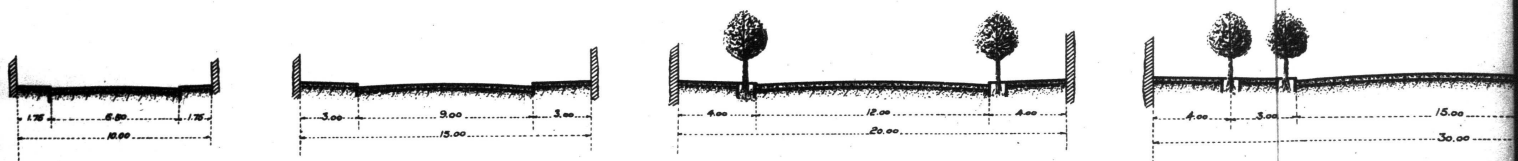




مدينة الاسكندرية الحديثة (منظر مأخوذ من الجو) -- (La Cité MODERNE (Vue aérienne). --
صورة مأخوذة بأذن من السلطة العسكرية. -- *Reproduction avec la permission des Autorités Militaires.*

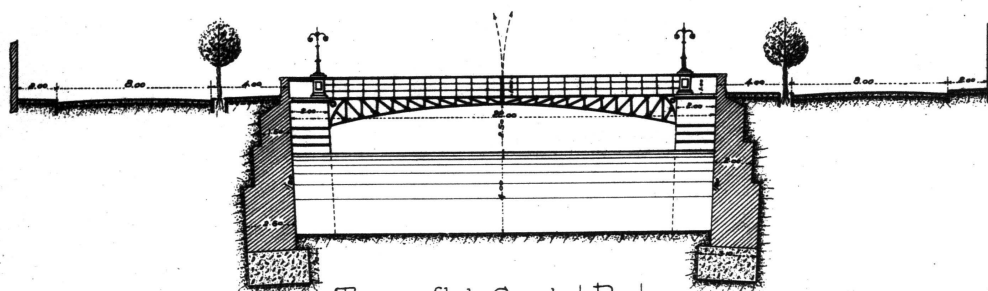
DÉTAILS DES AVENUES, RUES ET CANAL PROJETÉ.

تفاصيل عن الشوارع والقناه المزموه

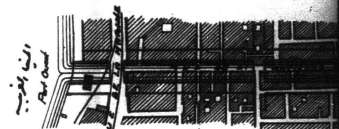


Type profils des Avenues

قطاع عن الشوارع

Type profil du Canal et Pont

قطاع القضاء، والكبرى



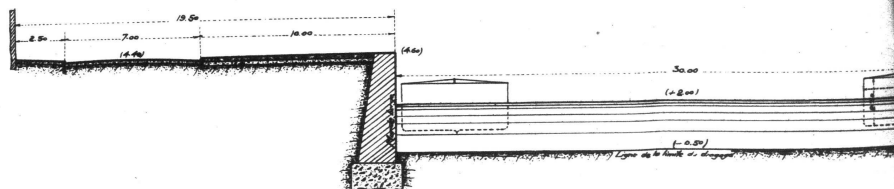
Plan du Canal

لنا. رأس النين

F/cheffe 15000

Canal Ras-el-Tin

قنا. رأس التين



Type profil du Canaf-Port Mah

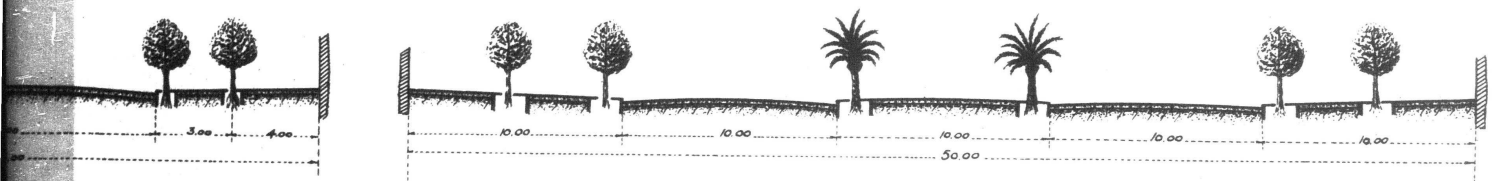
قطاع ترعه وميناء المحموديه

Eschelle 1:200

مقیاس $\frac{1}{500}$

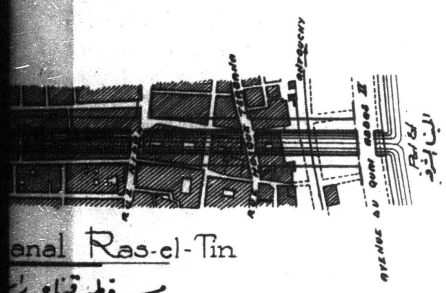


ÉS



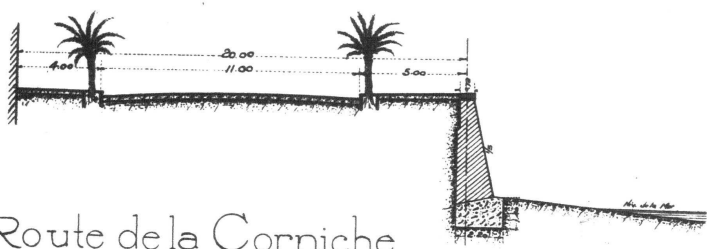
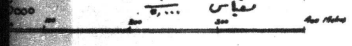
venues et Rues

قطاع



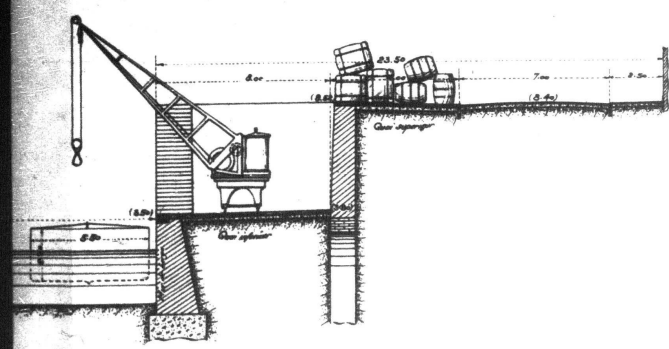
Canal Ras-el-Tin

مسقط قناه



Route de la Corniche

شارع الكورنيش



Mahmoudieh

قطاع

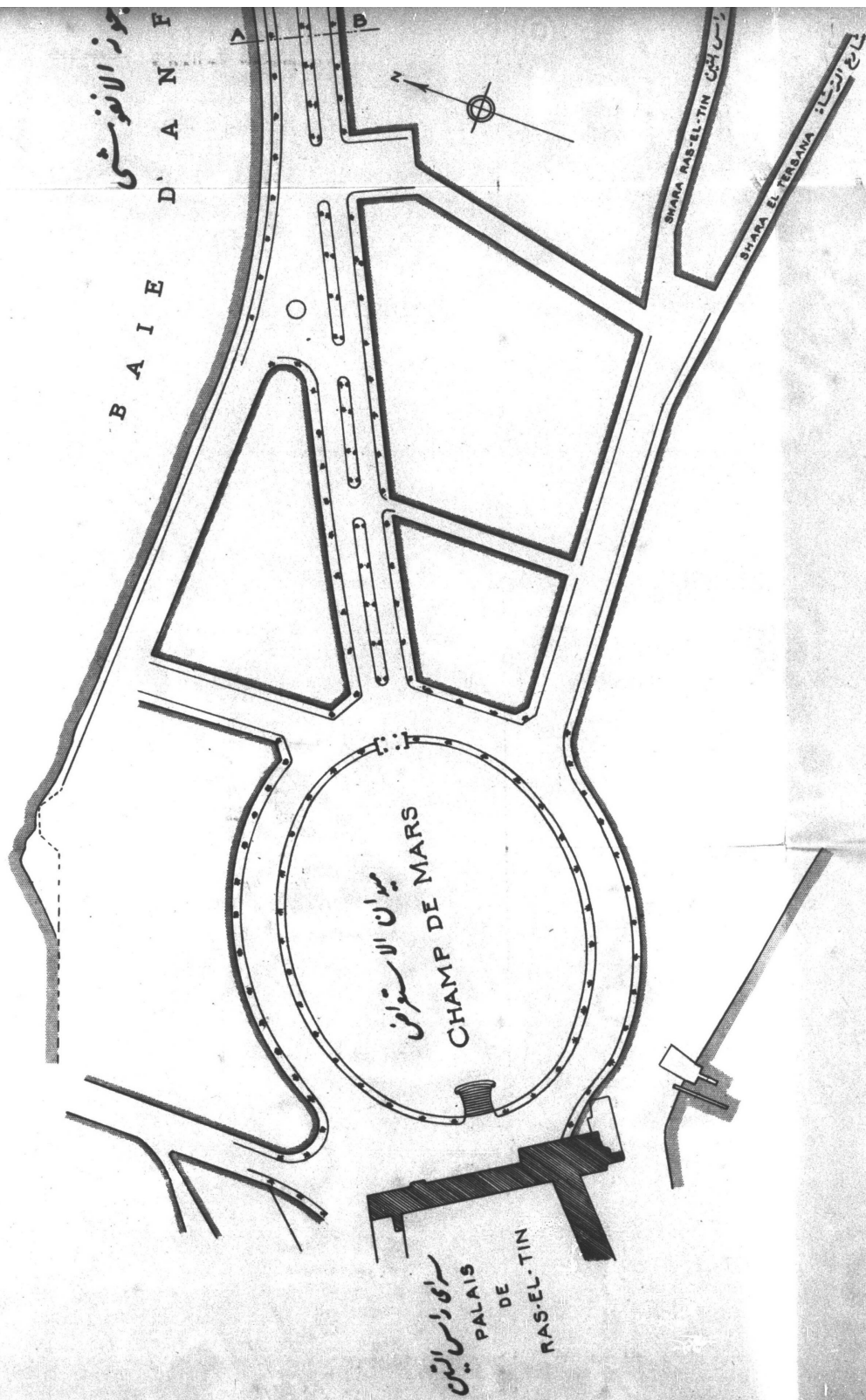
Bureaux de l'Ingenieur en Chef

W. H. Kean

Alexandrie le 29/6/1920

PROJET DE CHAMP DE MARS, BOULEVARD ET PLACE DES MOSQUÉES, À RAS-EL-TIN

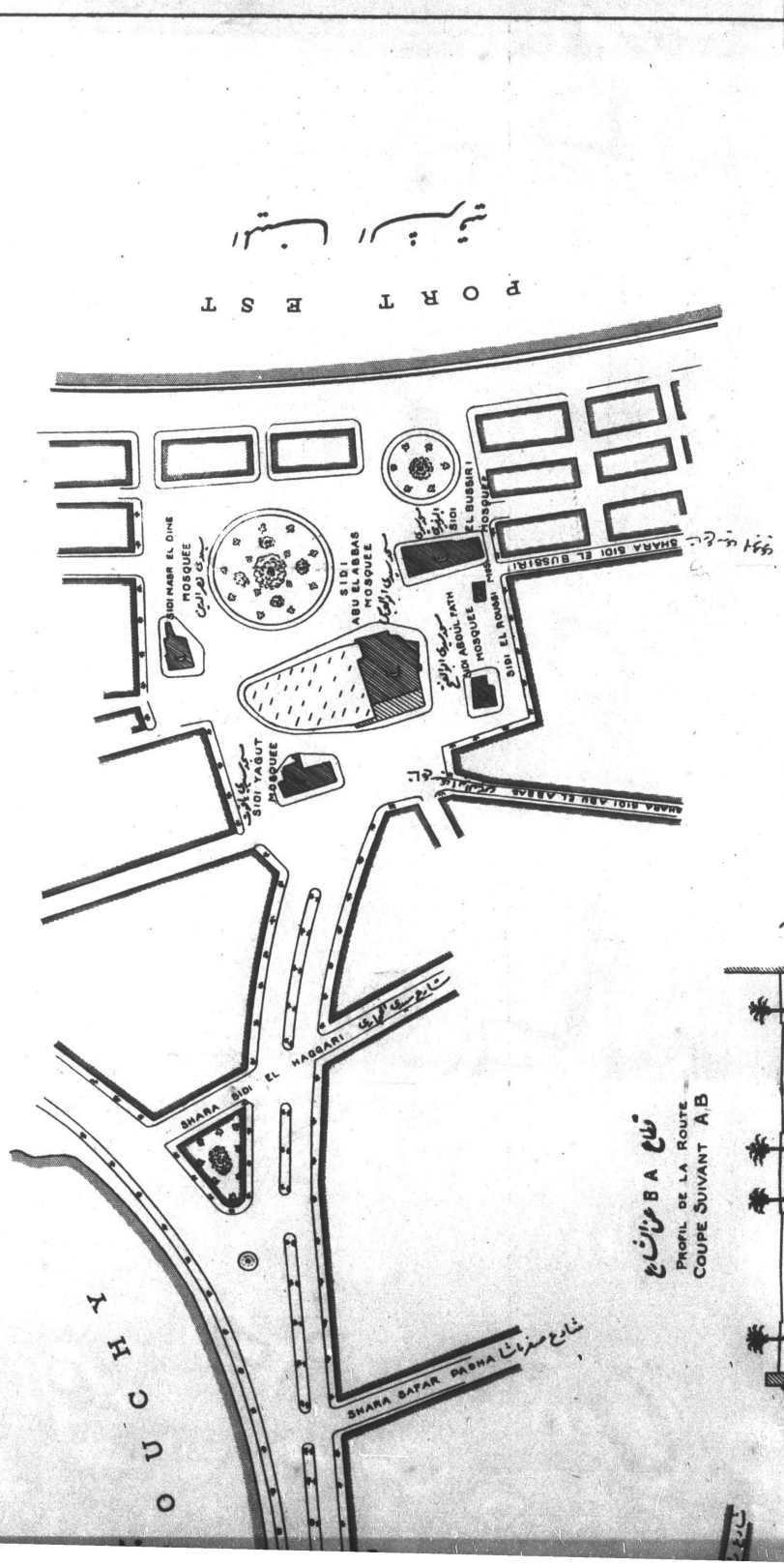
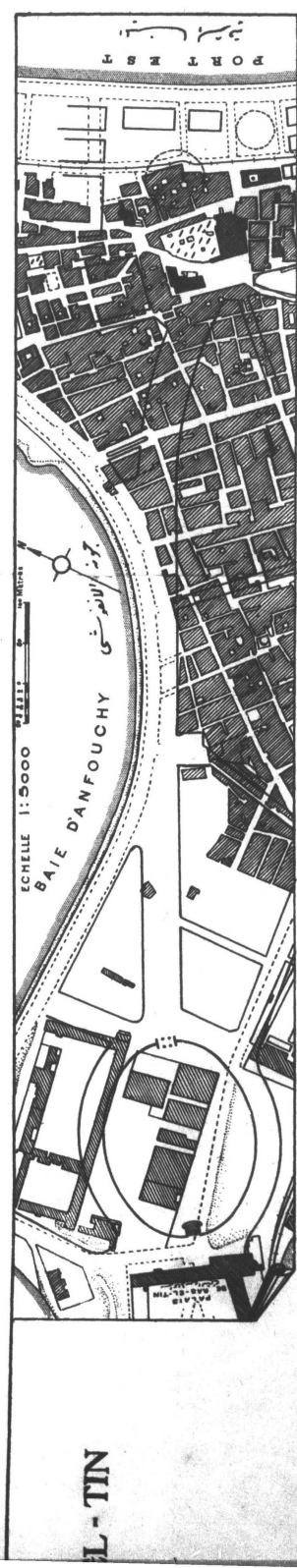
مشروع ميدان الاستقراض والشوارع والمباني بجده رأس التين



مقياس 1:2500

ECHELLE 1:2500





Bureau de l'Ingénieur en Chef

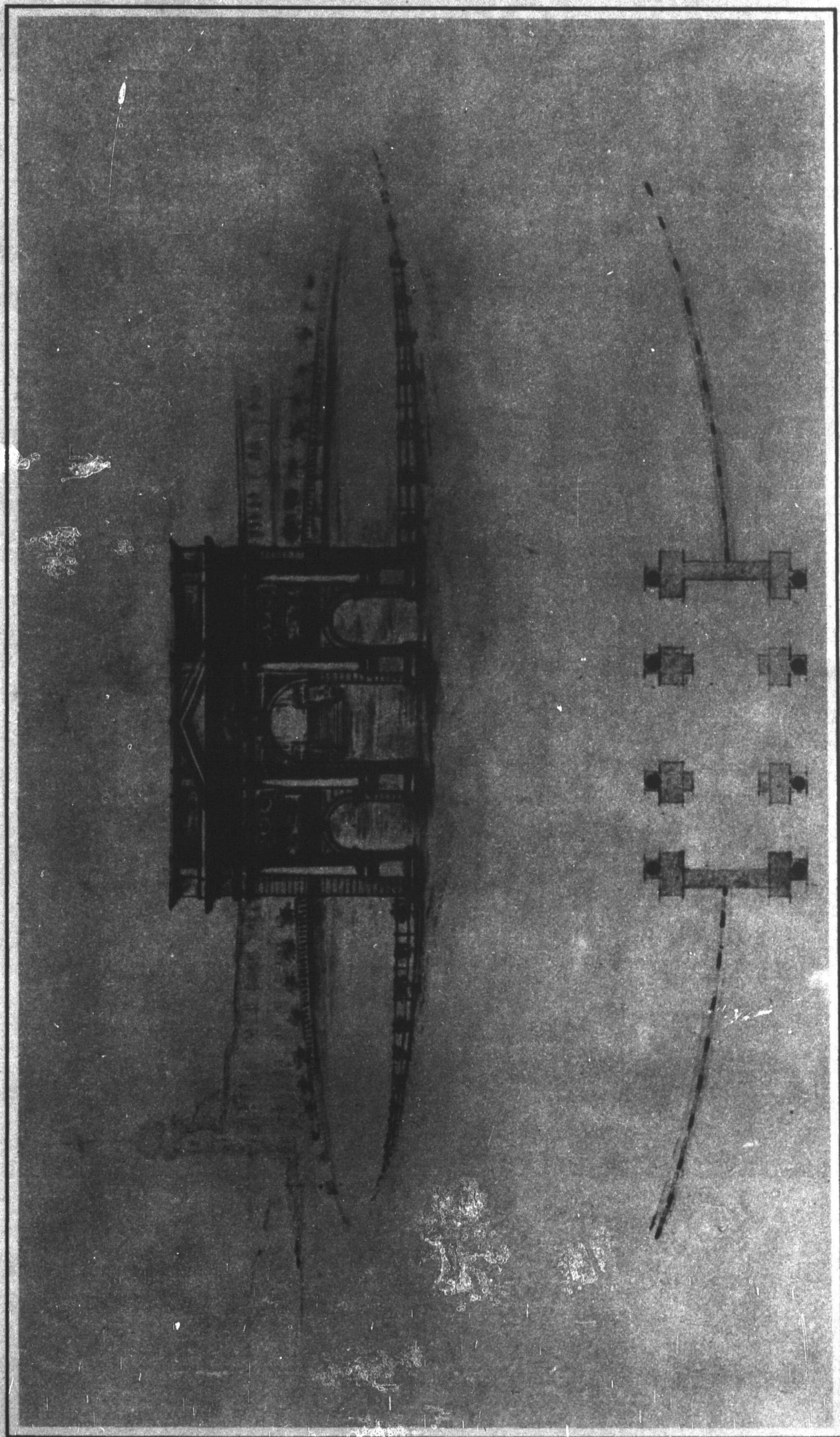
W. N. Hassan

Alexandrie, le 29/6/1920



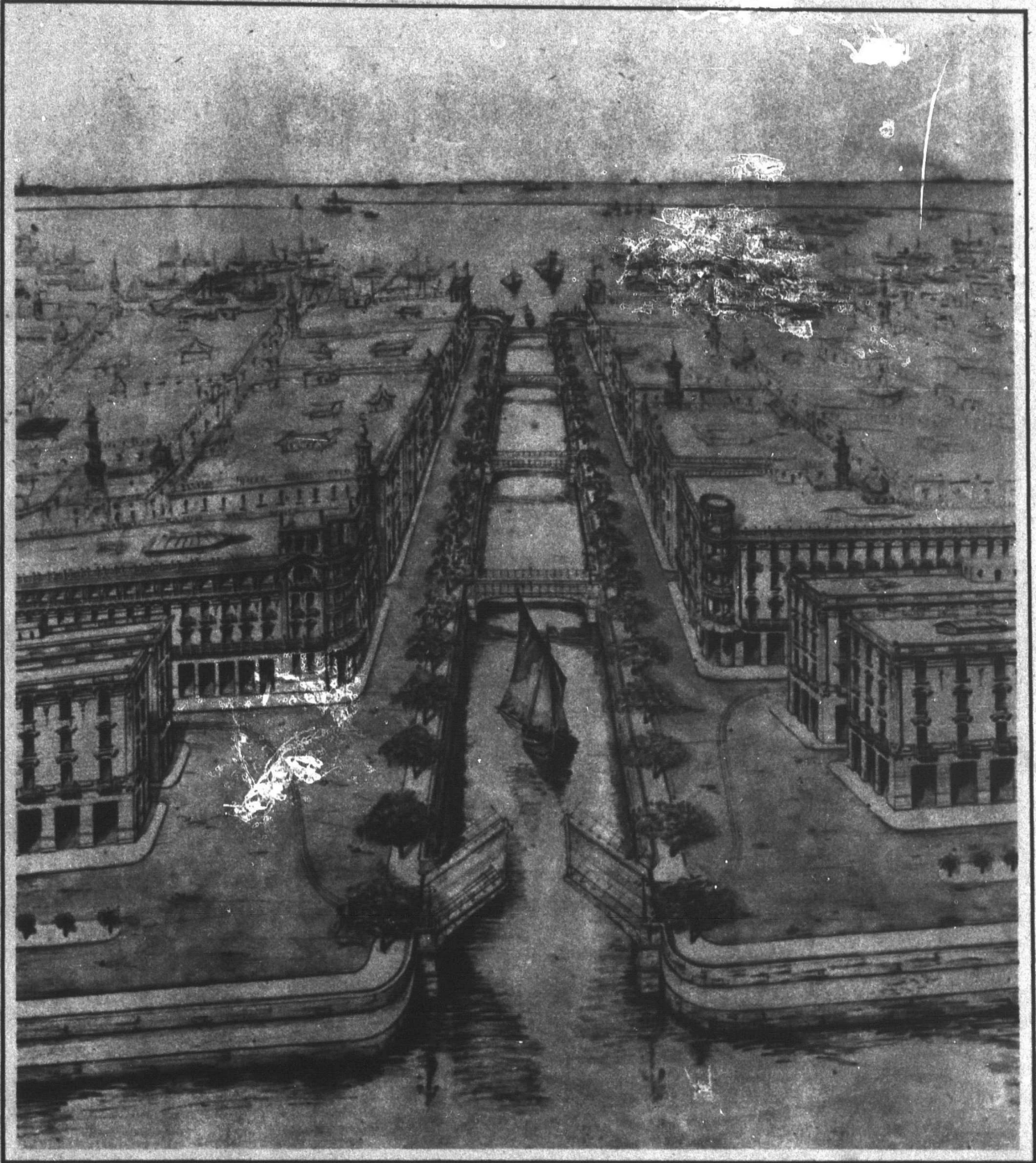
PROJET DE LA PLACE DES MOSQUÉES SIDI ABOU EL ABBAS, SIDI EL BOUSSIRI, SIDI YACOUT.

مشروع ميدان مساجد سيدى أبو العباس وسيدى البوصيرى وسيدى ياقوت



PROJET D'UN CHAMP DE MARS DEVANT LE PALAIS DE S.H. LE SULTAN À RAS EL TIN.

مشروع ميدان الاستعراض أمام سراي عظمة السلطان برأس التين



PROJET DU CANAL DE RAS EL TIN. — مشروع قنال رأس التين

PROJET DE LA PLACE DES OBELISQUES

مشروع ميدان التلسكوبين

NOTE L'une des entrées du Césareum
était marquée par les obelisques
aux points A et B

(L'obelisque A se trouve actuelle-
ment à Londres et l'obelisque B
à New-York)

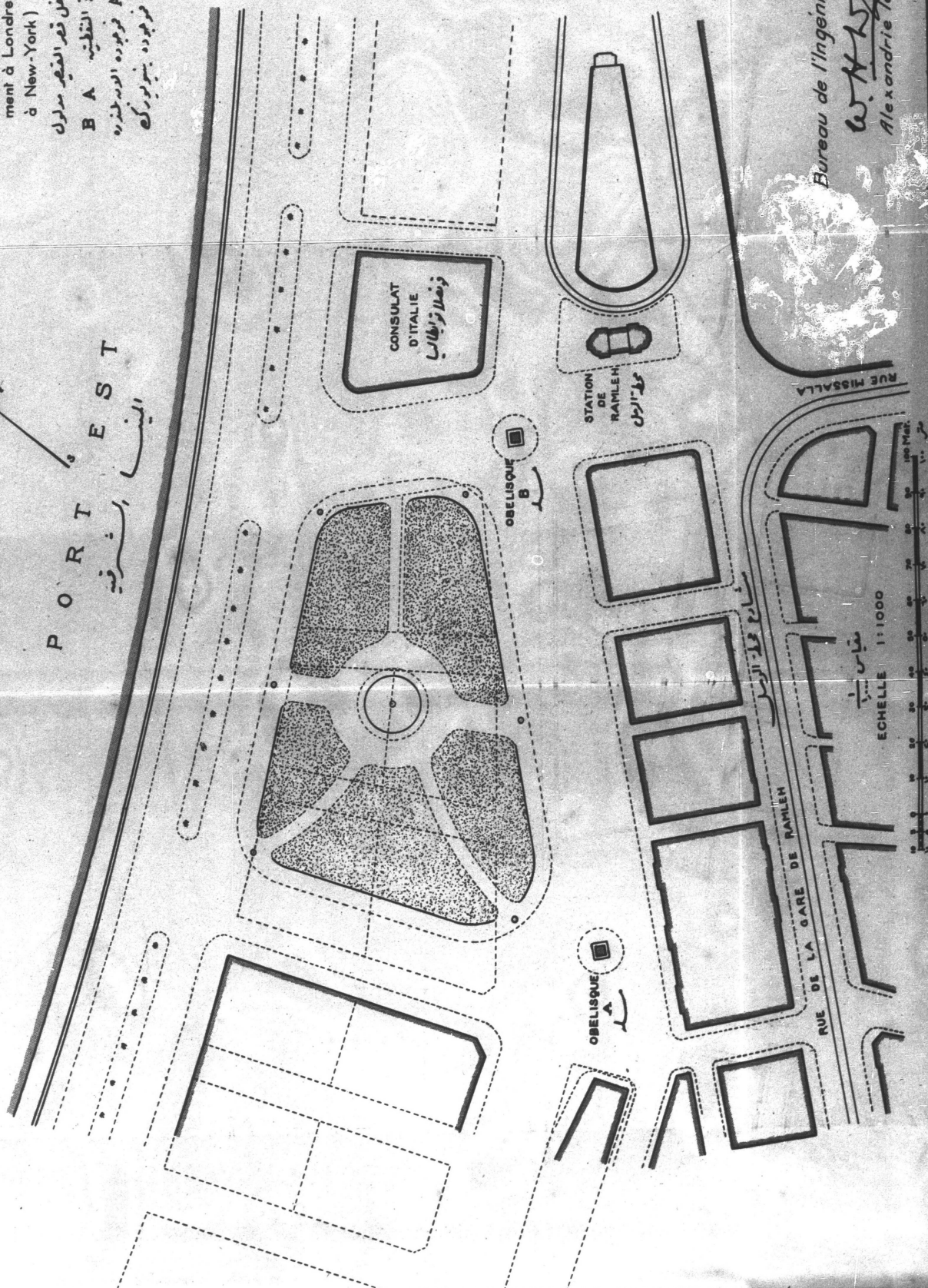
لؤلؤ كاهن مدخل قصر العظمى مدلول

على بستان في القطية B A

أفانما لحد A فوجوده الودع لحد

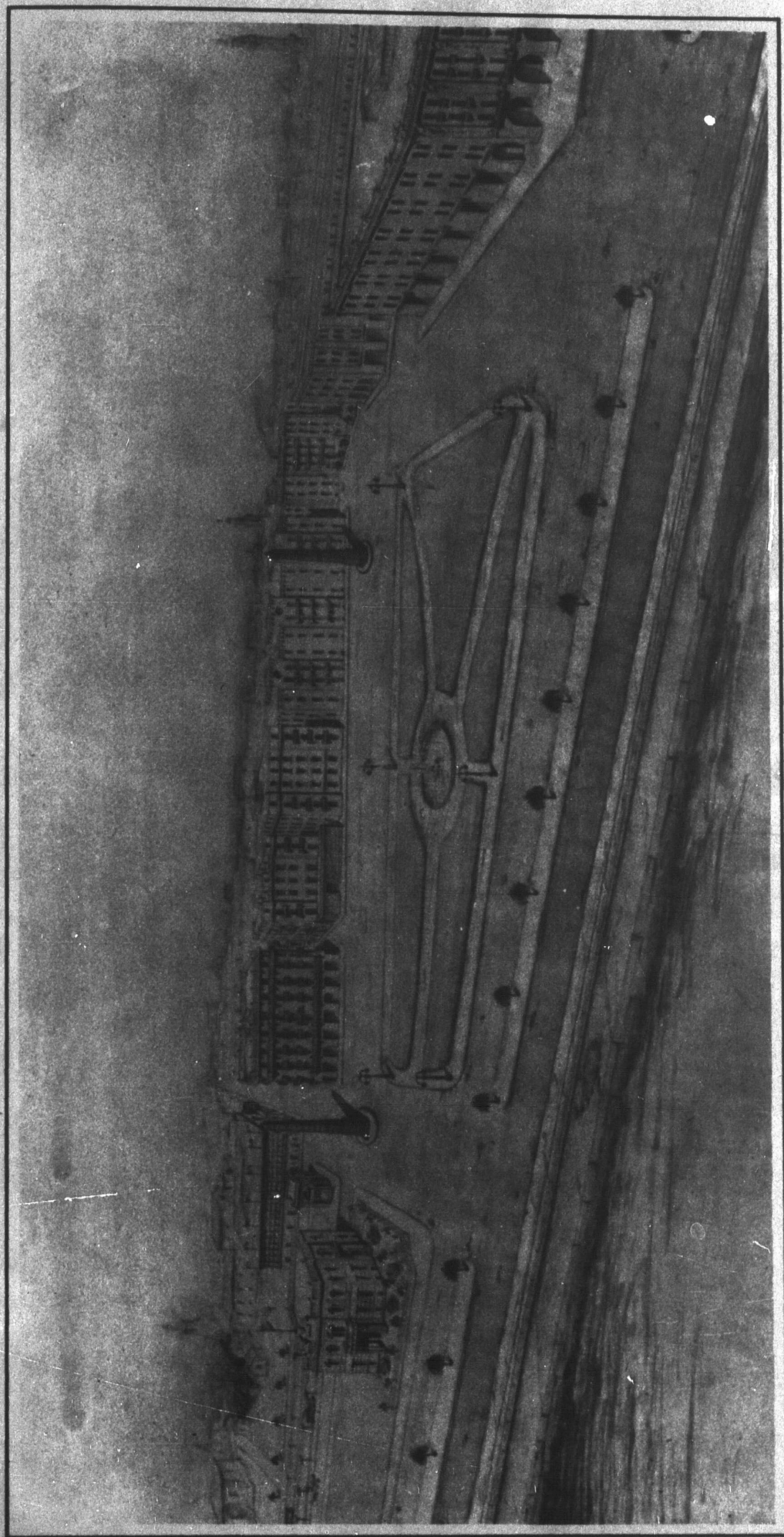
رأيا التلسكوب فوجوده بنو برك

P O R T E S T
الينف



Bureau de l'ingénieur en Chef

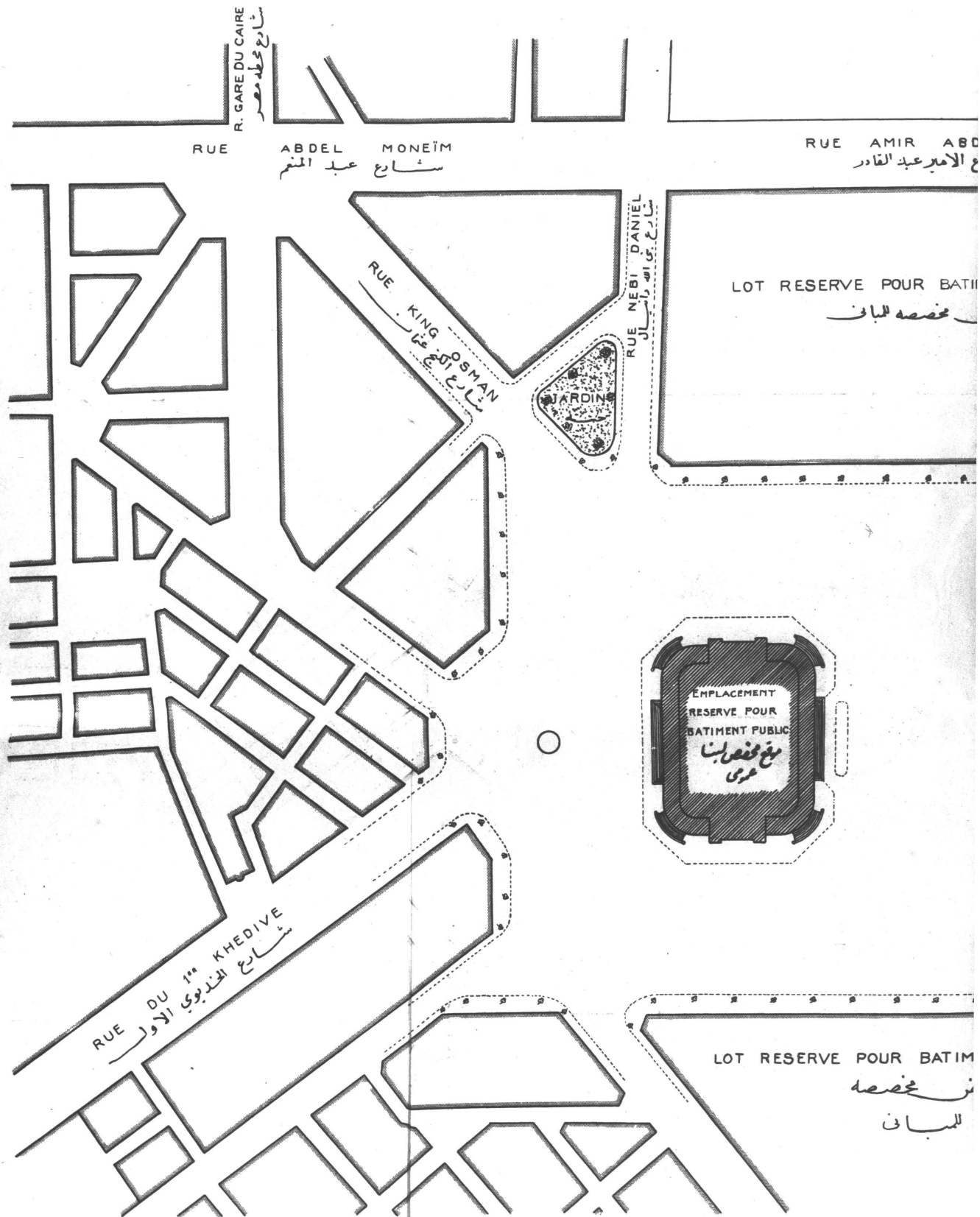
29/6/1920
Alexandrie



مشروع ميدان المسكين — PROJET DE LA PLACE DES OBÉLISQUES.

PROJET DE LA PLACE DE

مشروع ميدان المحطة



ECHELLE 1:1000

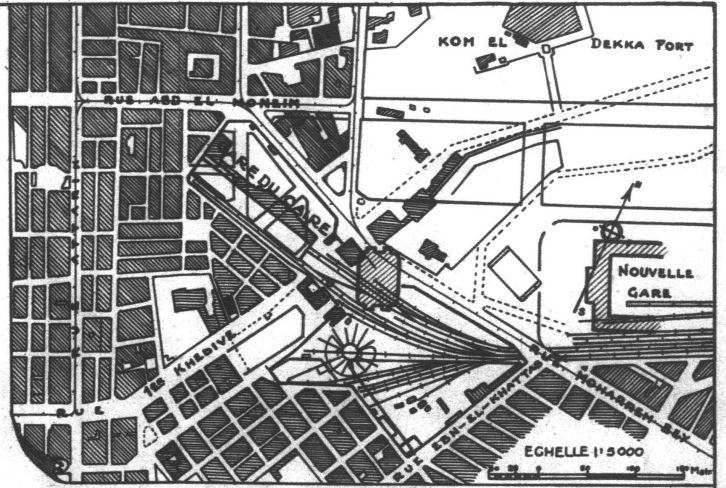
مقياس الرسم 1:1000



DE LA GARE

R ABDEL KADEB
شارع الامير عبد

UR BATIMENT PUBLIC
ارضى محفص



RUE N° 1737
شارع ١٧٣٧

NOUVELLE GARE DU CAIRE
EN CONSTRUCTION

المحطة الجديدة

BATIMENT PUBLIC

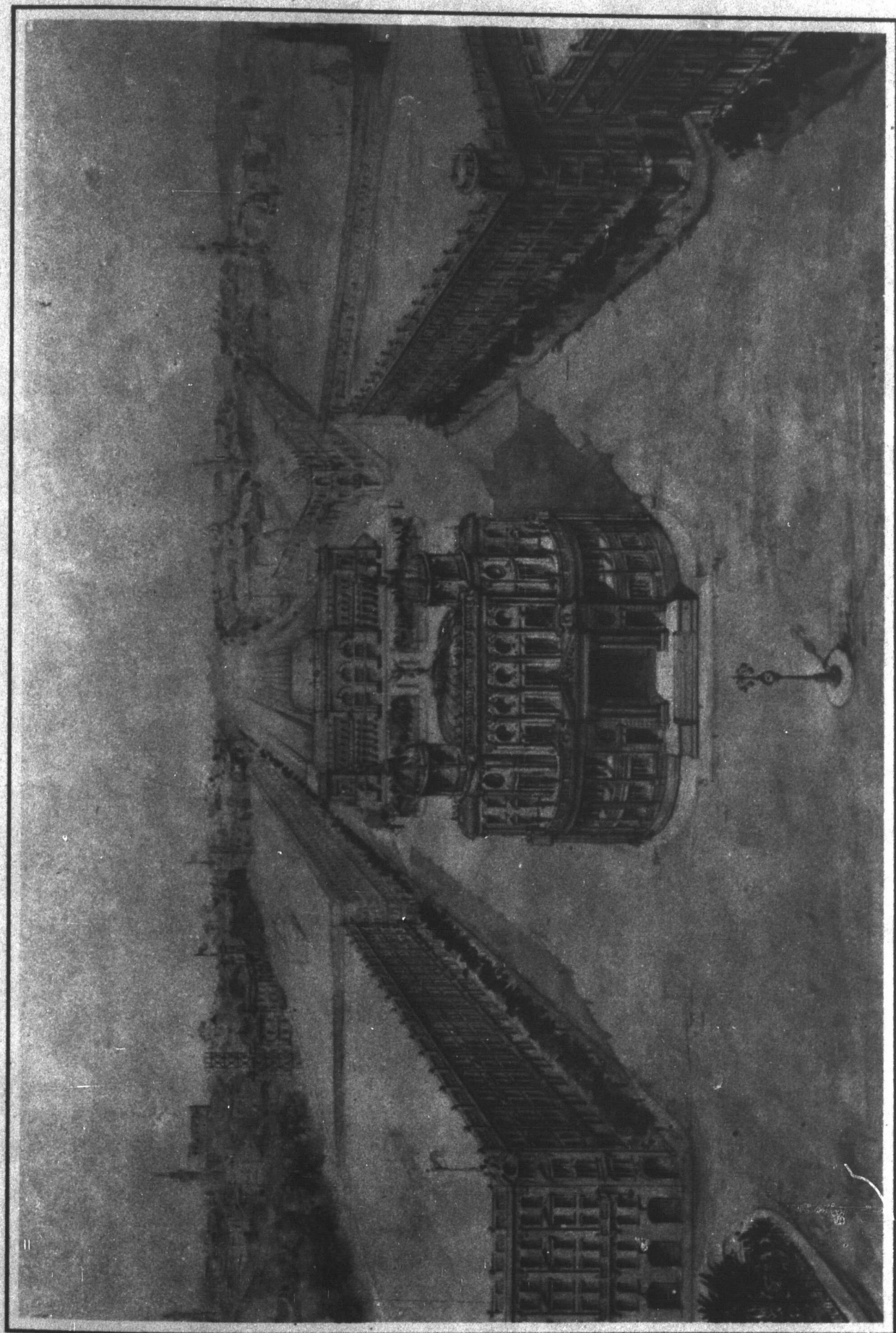
ارضى
للبن

RUE EBN EL-KHATTAB
شارع ابن الخطاب

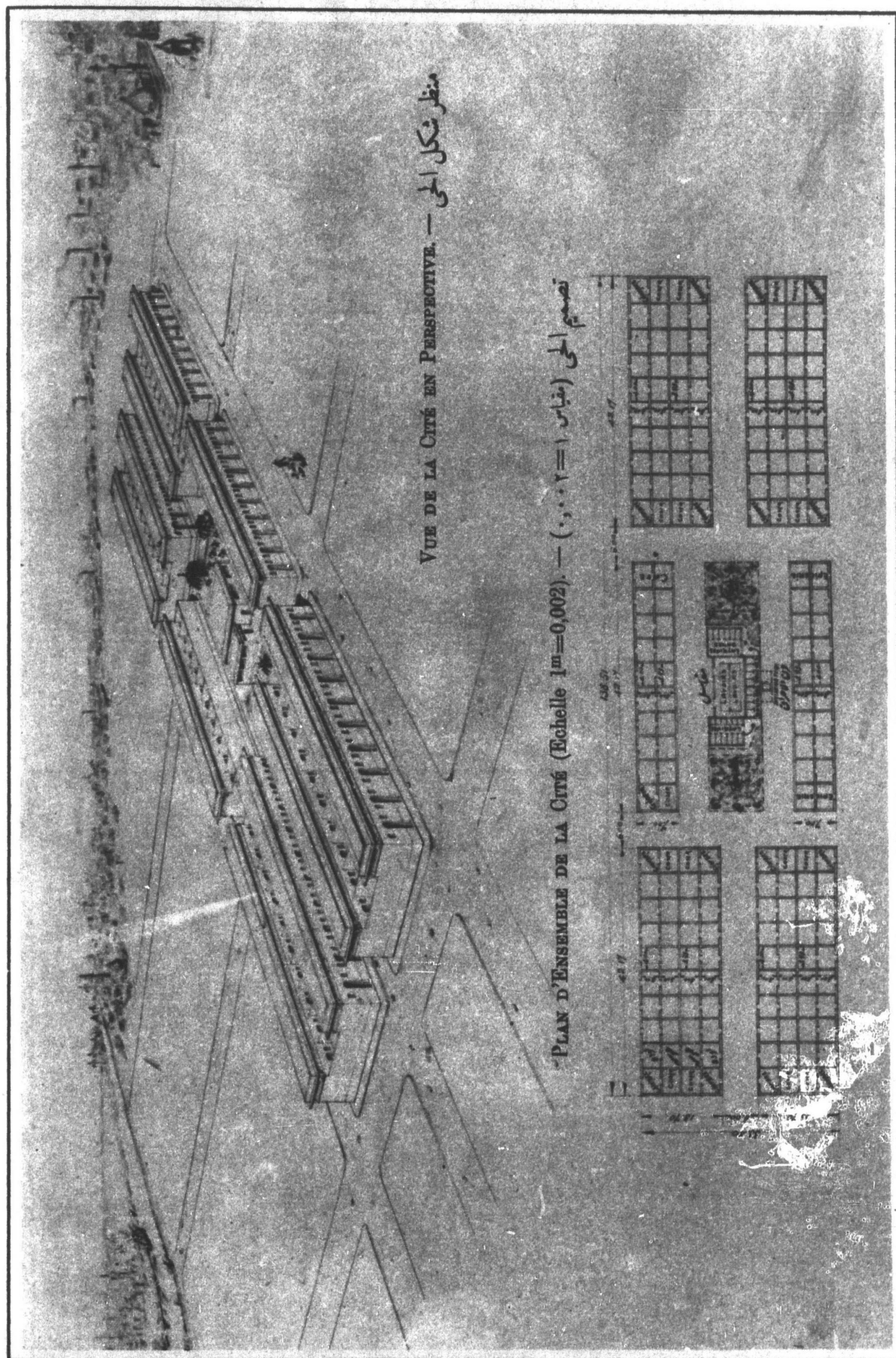
RUE MOHARREM-BEY
شارع محمد بن

BUREAU DE L'INGENIEUR EN CHEF

W. H. L. Jean
ALEXANDRIE LE 29/6/1920

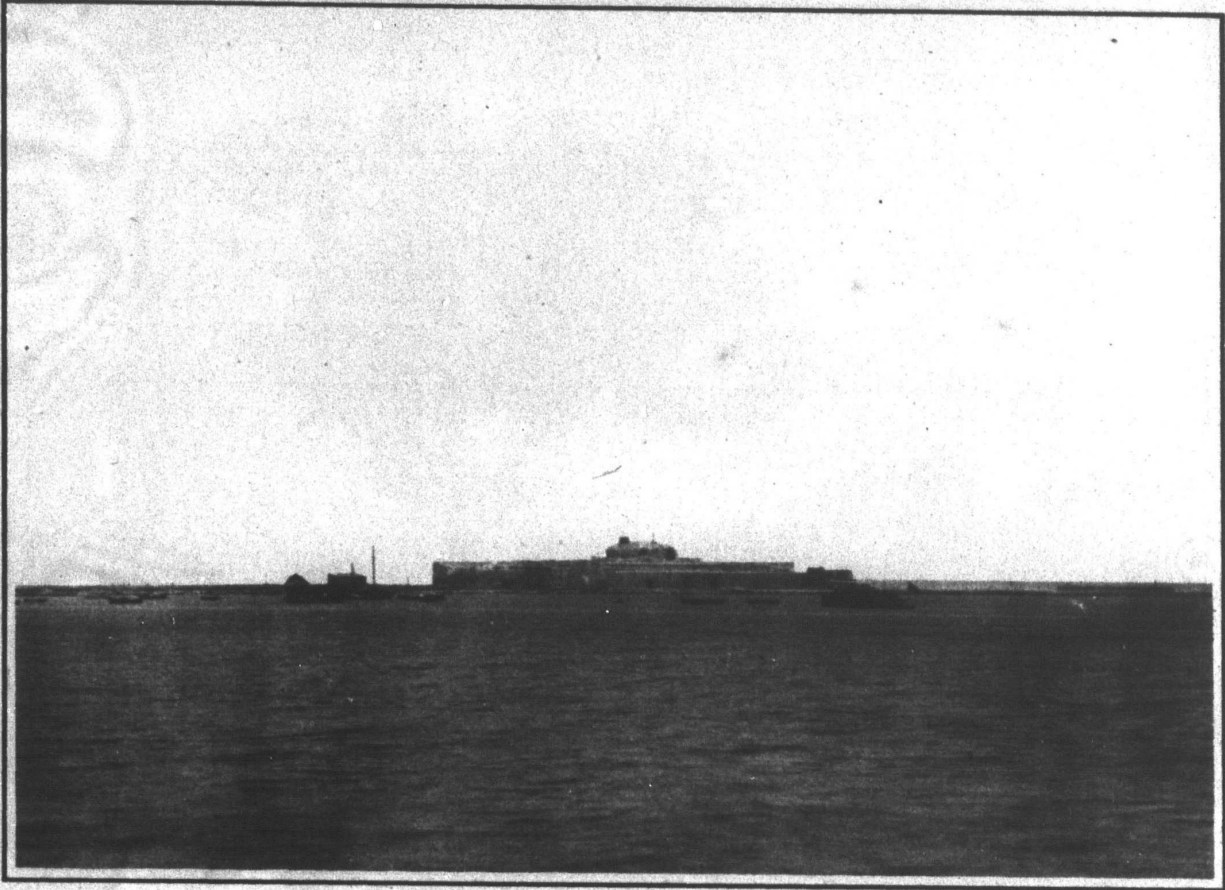


مشروع ميدان الحطة — PROJÉT DE LA PLACE DE LA GARE.



PROJET D'ÉDIFICATION D'UNE CITÉ COMPRENANT 100 HABITATIONS POUR INDIGENTS.

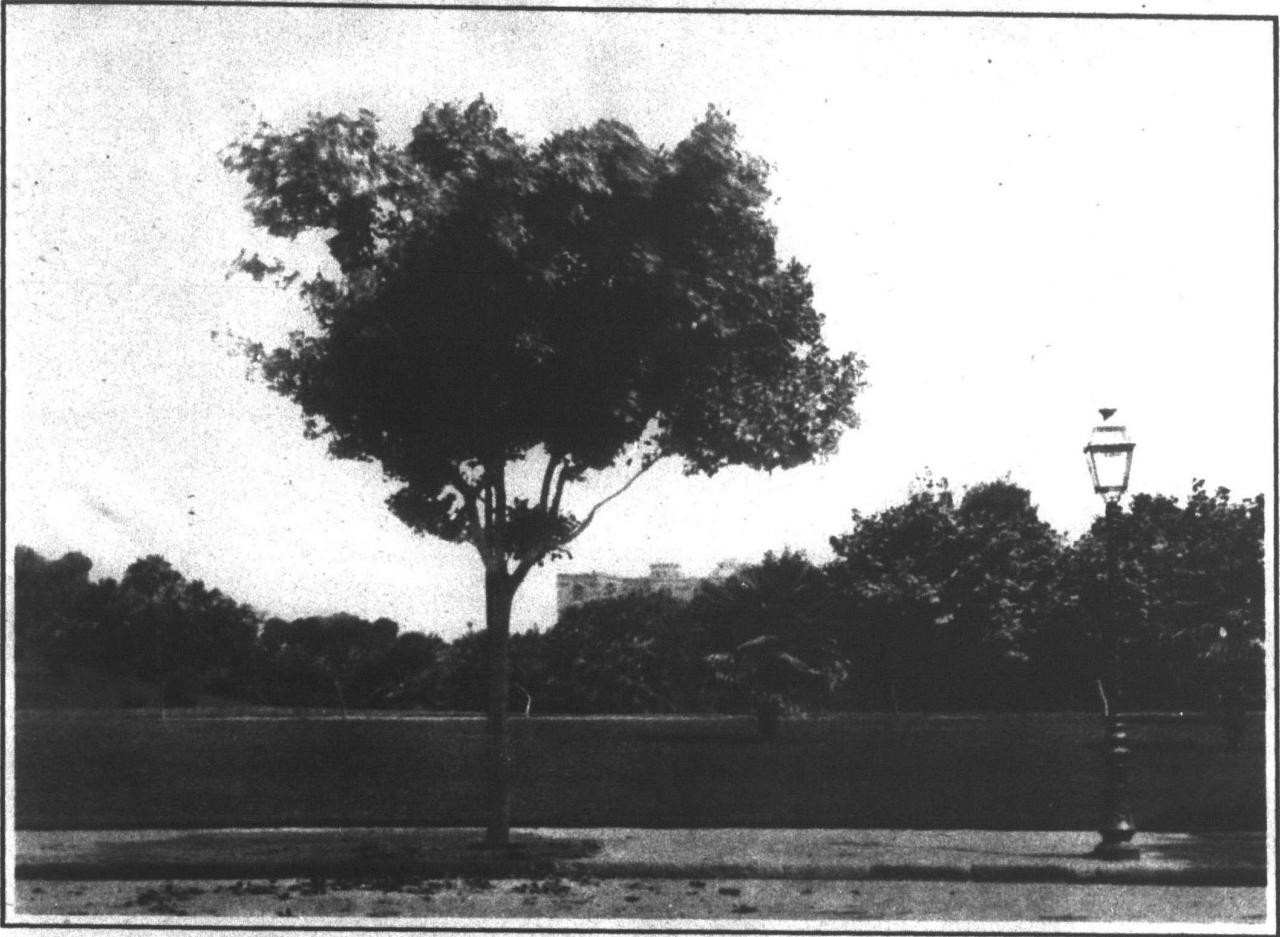
مشروع بناء حى للفقراء مكون من مائة ١٠٠ مسكن



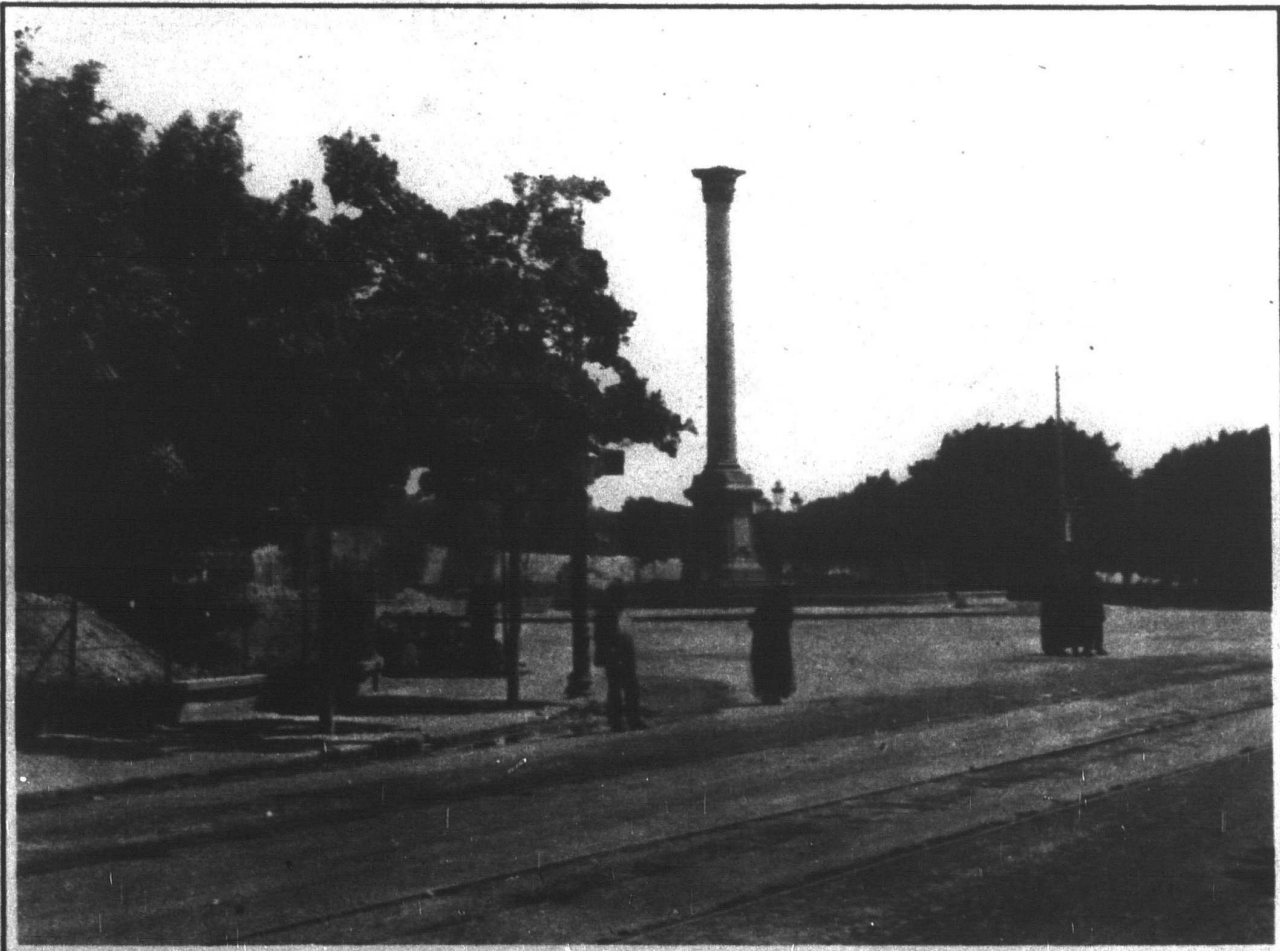
PORT-EST ET LE FORT KAÏD BEY. — الميناء الشرقية وطاية قايتباي



RUE FOUAD I (Vue prise des Parcs). — شارع فؤاد الأول من حجة المنتزهات



PARC NORD. — المنتزه الشمالى



COLONNE KHARTOUM ET PARC. — عمود الخرطوم ومنتزه



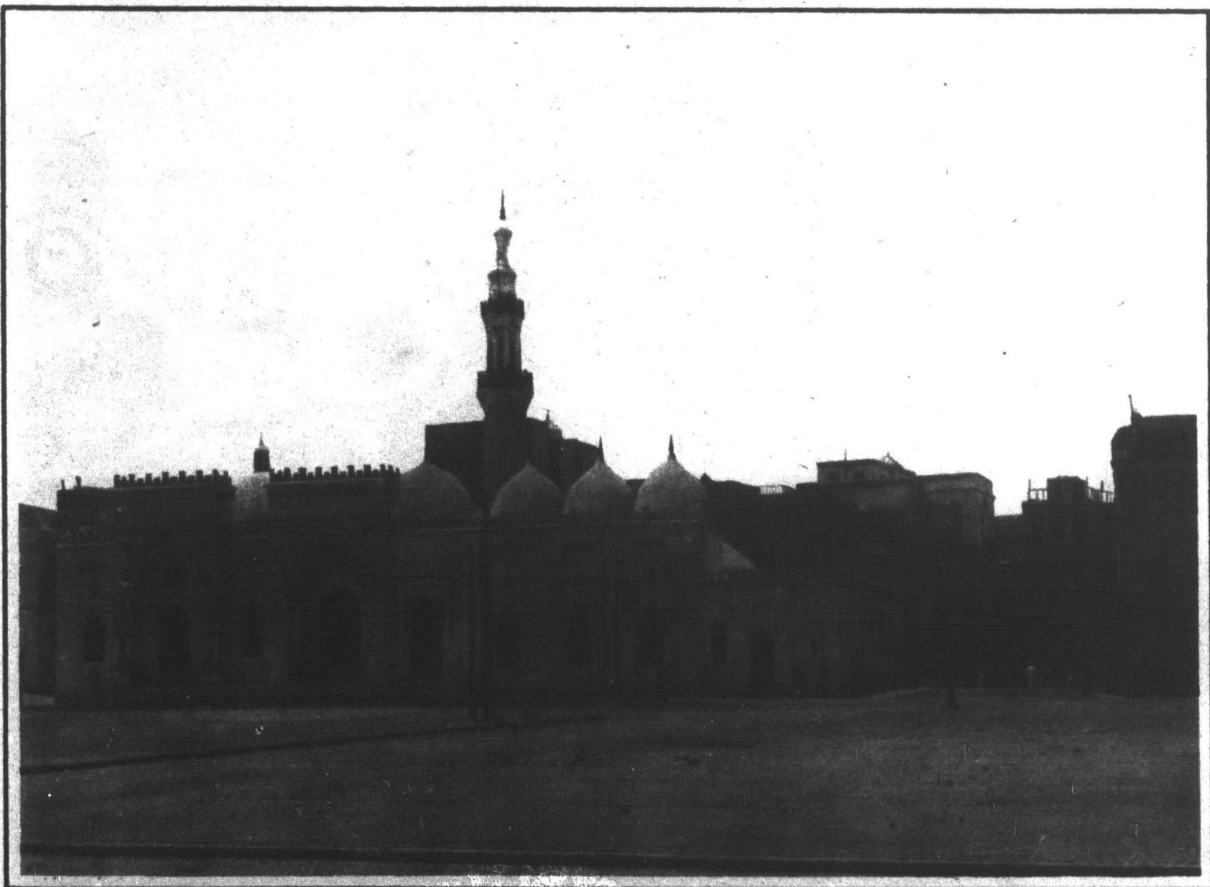
العمود السواری بکوم الشقافه.— COLONNE POMPÉE (Kom el Chougafa).



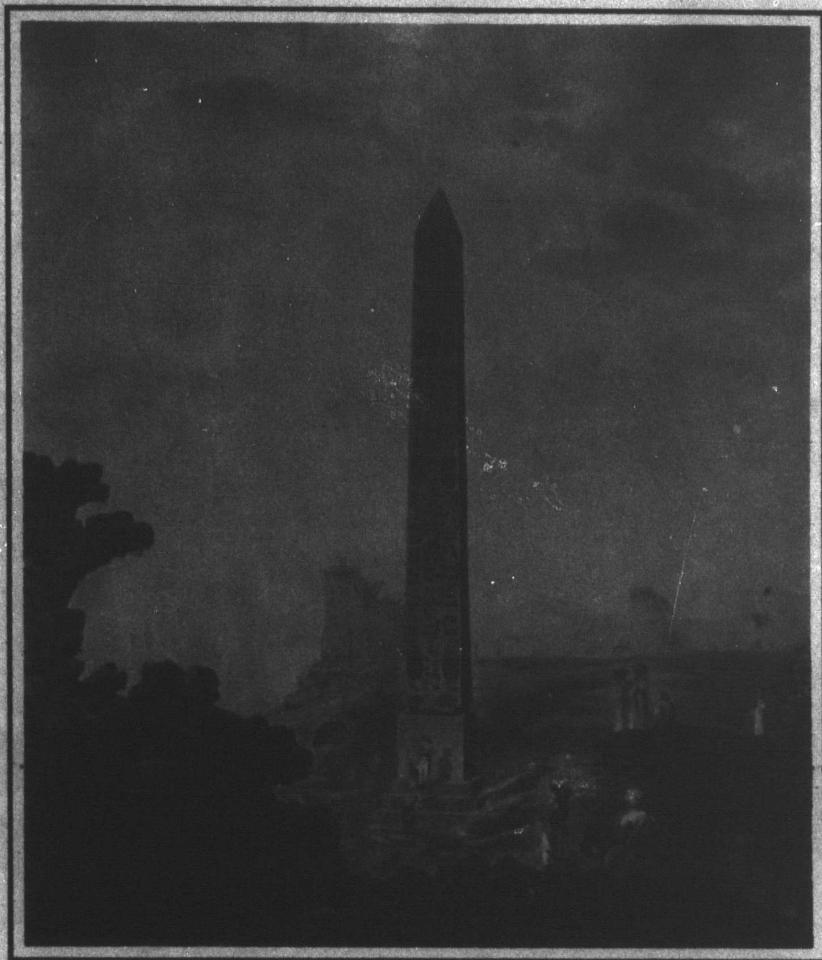
میدان محمد علی — PLACE MOHAMED ALY.



عشش — ECHECHES.



مسجد سيدى البوصيرى — MOSQUÉE DE SIDI EL BOUSSIRI.



L'AIGUILLE DE CLÉOPÂTRE. — مسلة كليوباتره
(Reproduction d'une vieille gravure dans la collection du Dr. Granville C.M.G., U.B.E.)



ROUTE DE LA CORNICHE (Ibrahimieh). — شارع الكرنيش بالابراهيميه

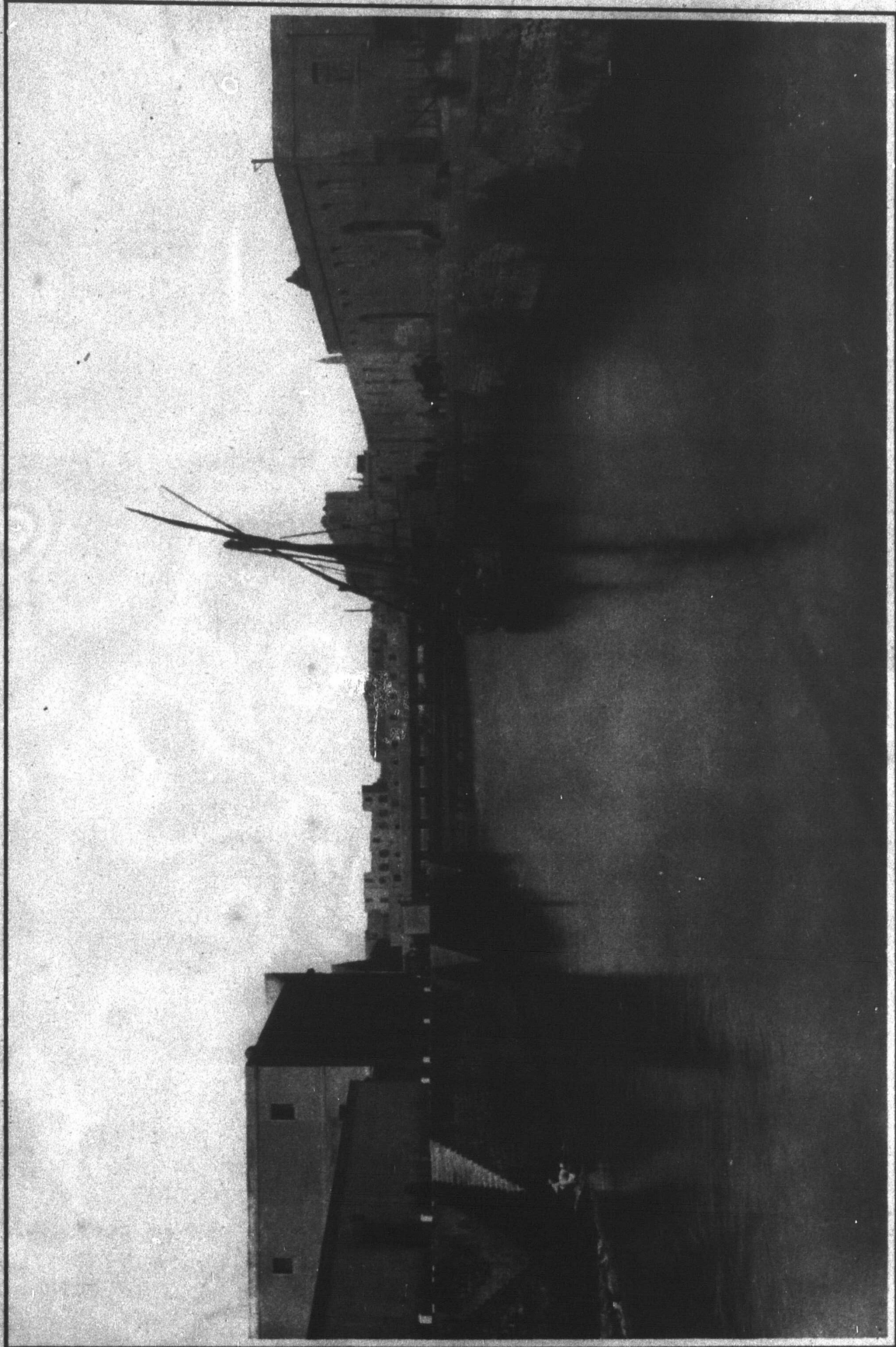


ENTRÉE DU JARDIN NOUZHA. — مدخل جنينة الزهه



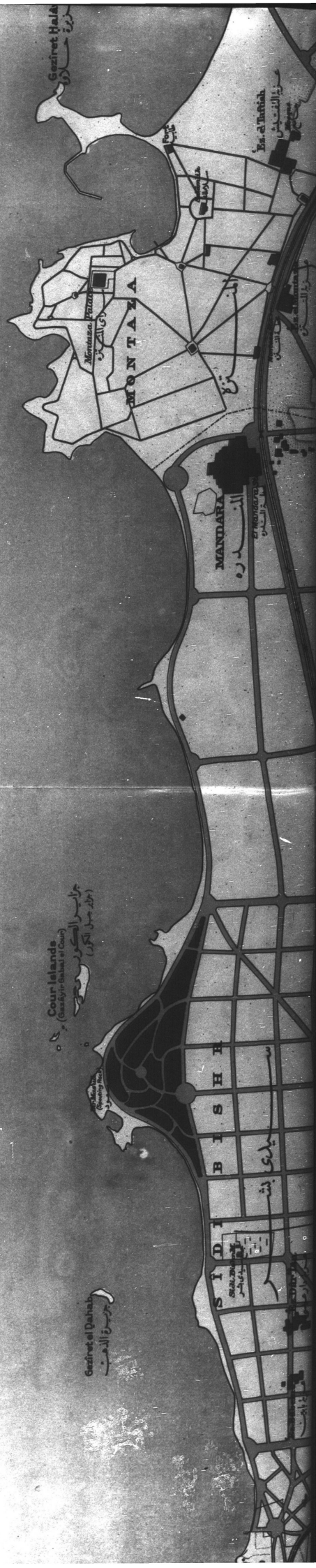
JARDIN ANTONIADIS. — جنينة أنطونياس

ترعة الحمودية — CANAL MAHMOUDIEH.



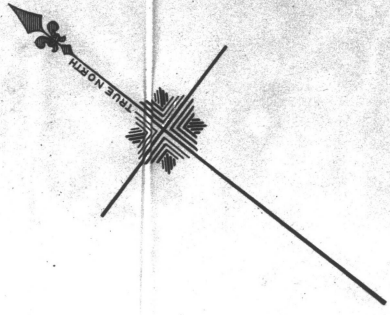
المتوسط

الإيضاح

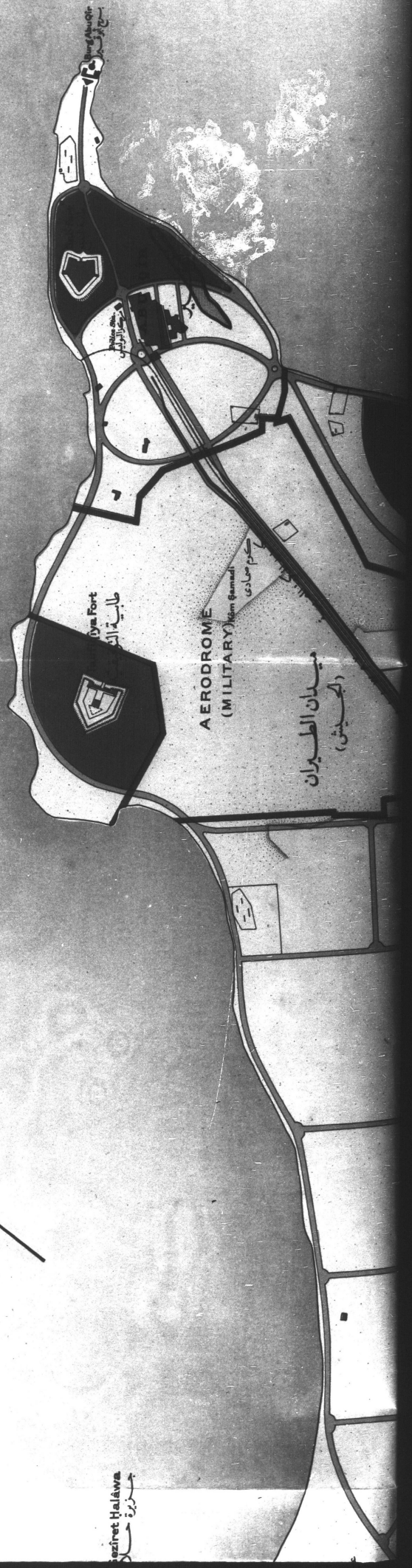


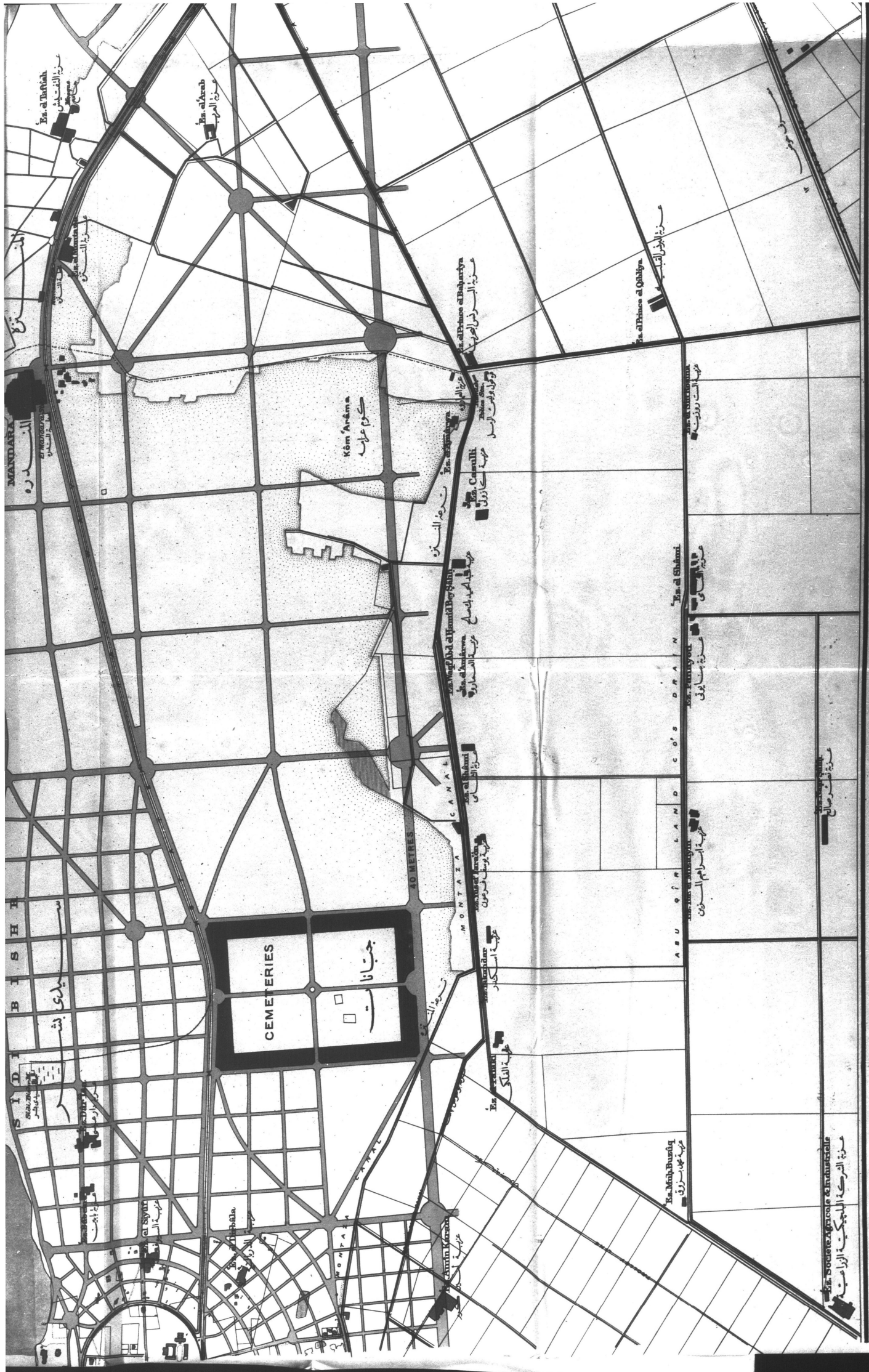
البحر

البحر



جزيرة Halawa
جزيرة حلاوة



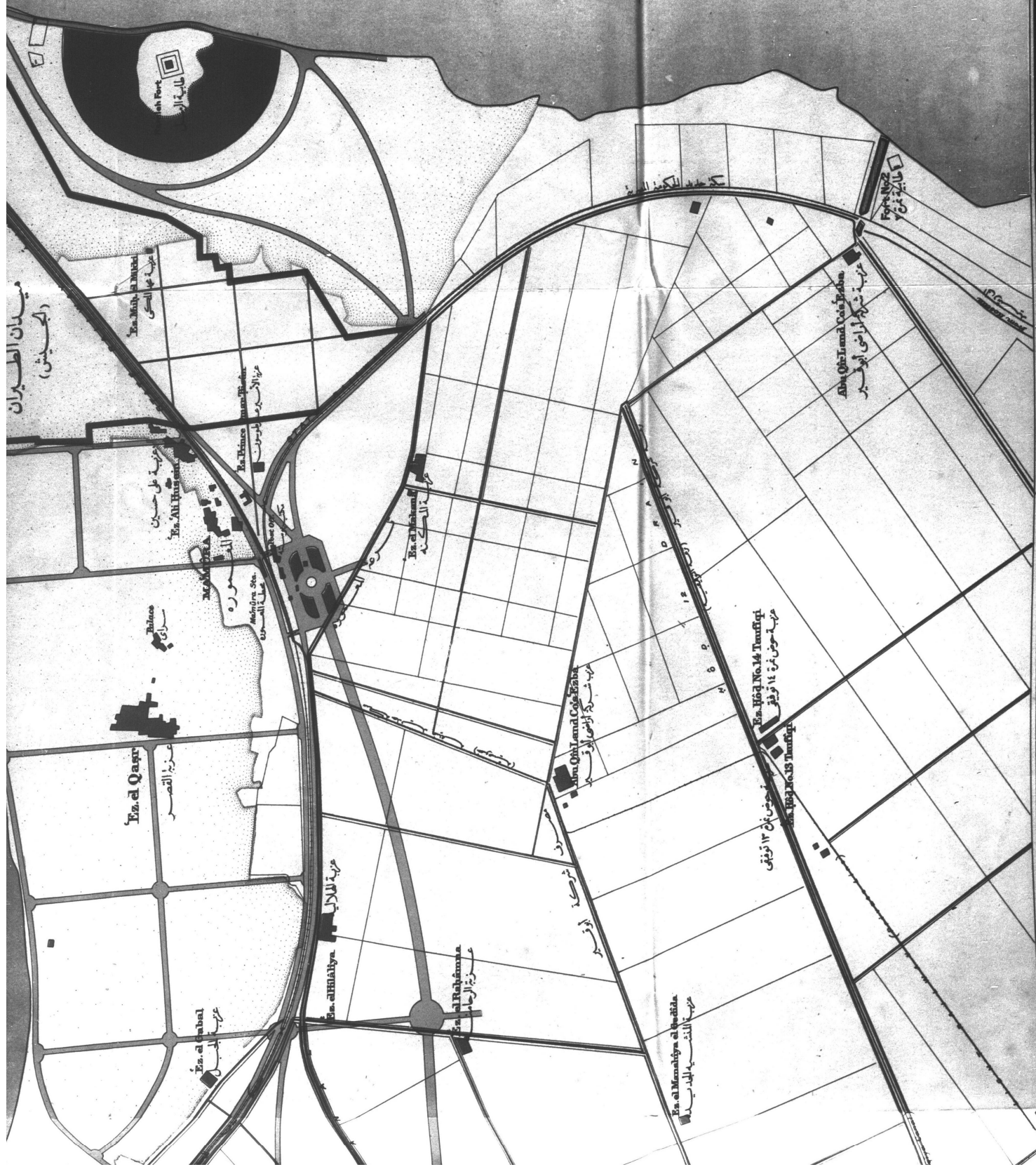


A B U Q I R

B A Y

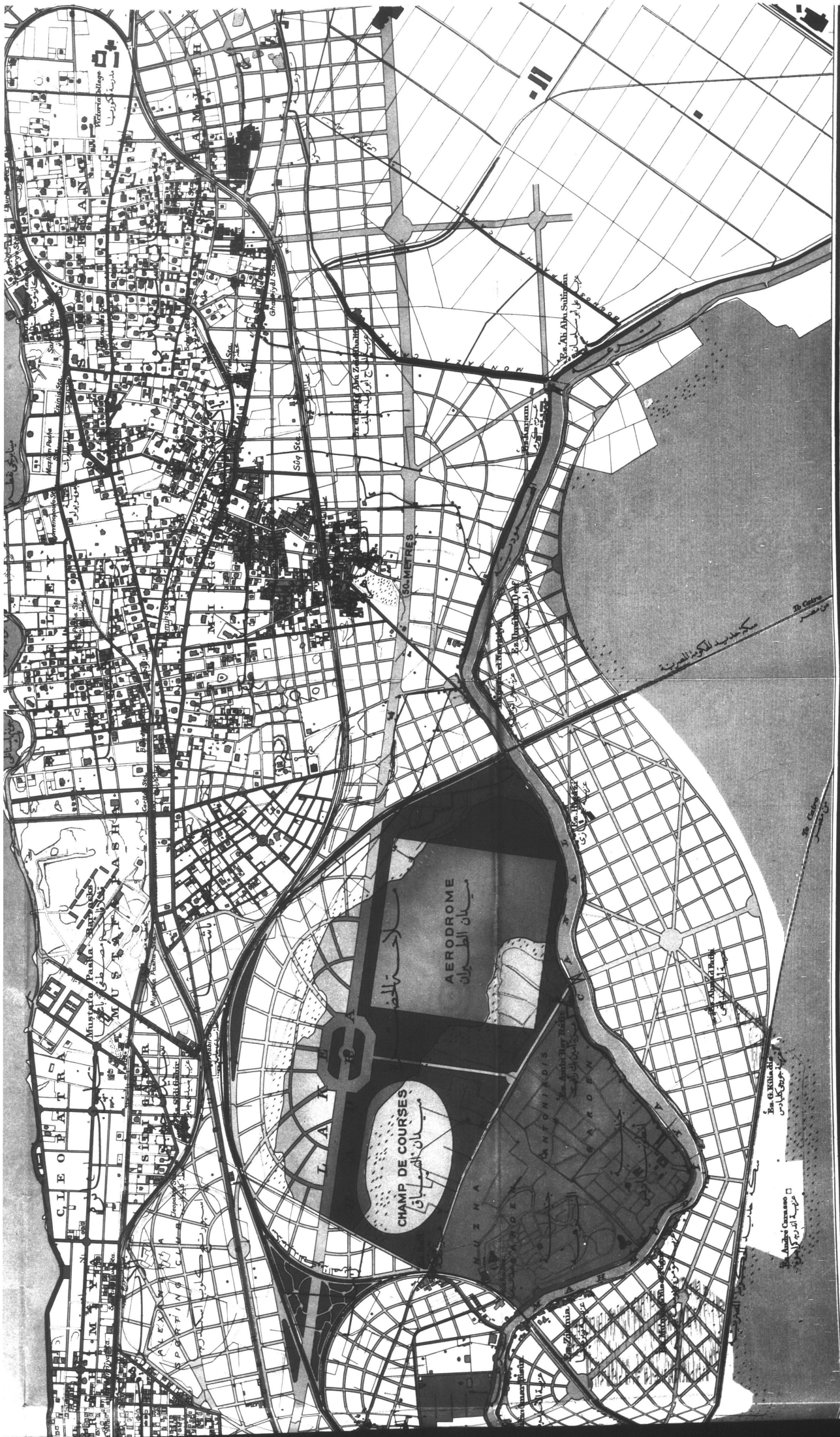
بحر

البحر



W. H. Dean

M. INST. C.E.
ENGINEER-IN-CHIEF
ALEXANDRIA MUNICIPALITY
Alexandria, 8th October 1919.



مدرسة كربلاء
Karbala School

CHATEAU
MUSÉE
MUSEUM

ميدان السباقات
CHAMP DE COURSES

ميدان الطيران
AERODROME

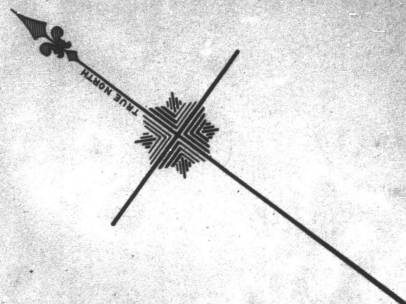
مدرسة علي بن ابي طالب
Ali ibn Abi Talib School

مدرسة جعفر كاشان
Jafar Kashan School

مدرسة الزهراء
Zahra School

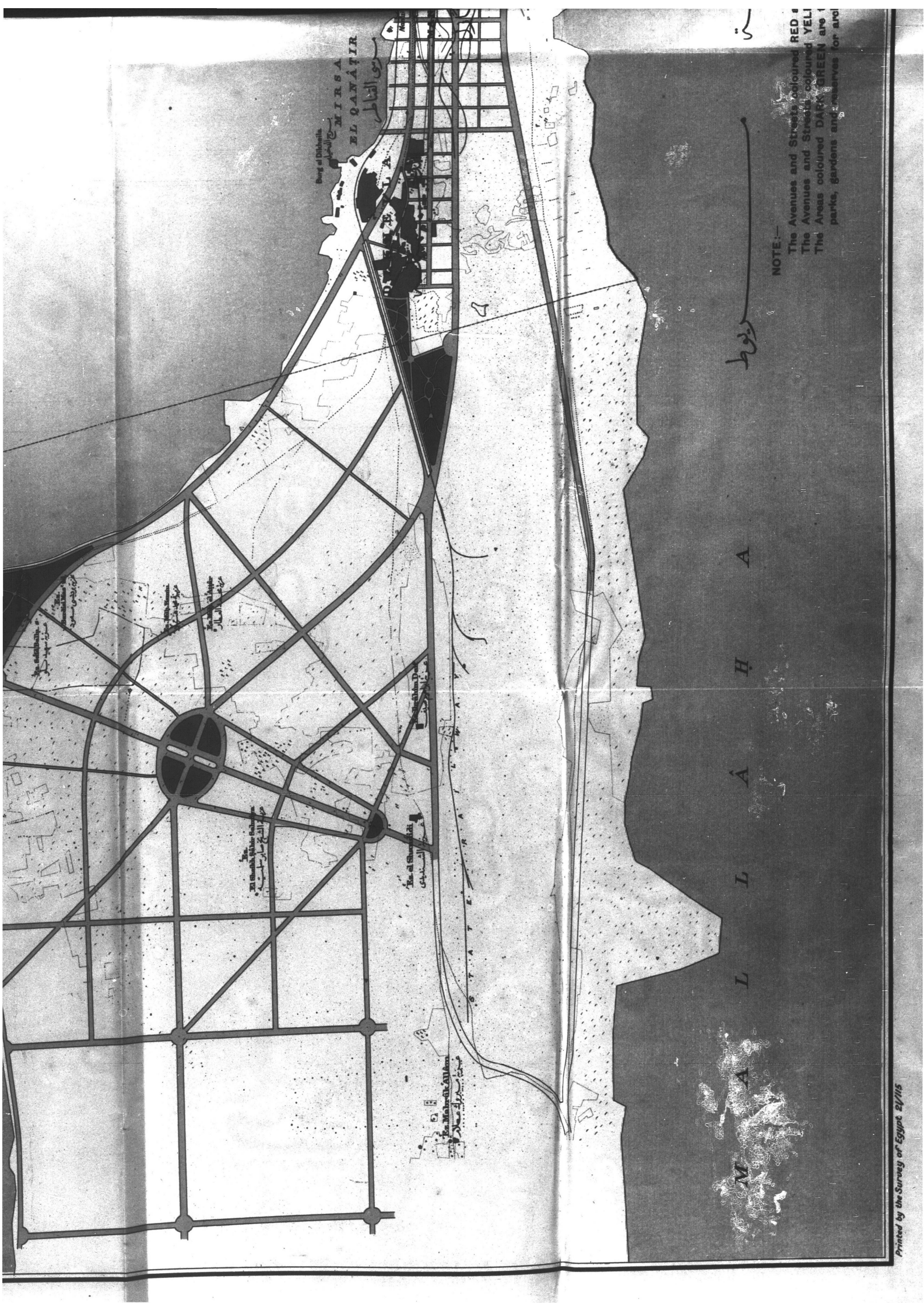
R A N E A N

S E A



طريق البحار الرابع

O U T E R
H A R B O U R



بورج الديخيلة
MIRSA
EL QANATIR
مرسى القنطرة

ميدان التحرير
El Tahrir Square

قناة السويس
Suez Canal

M

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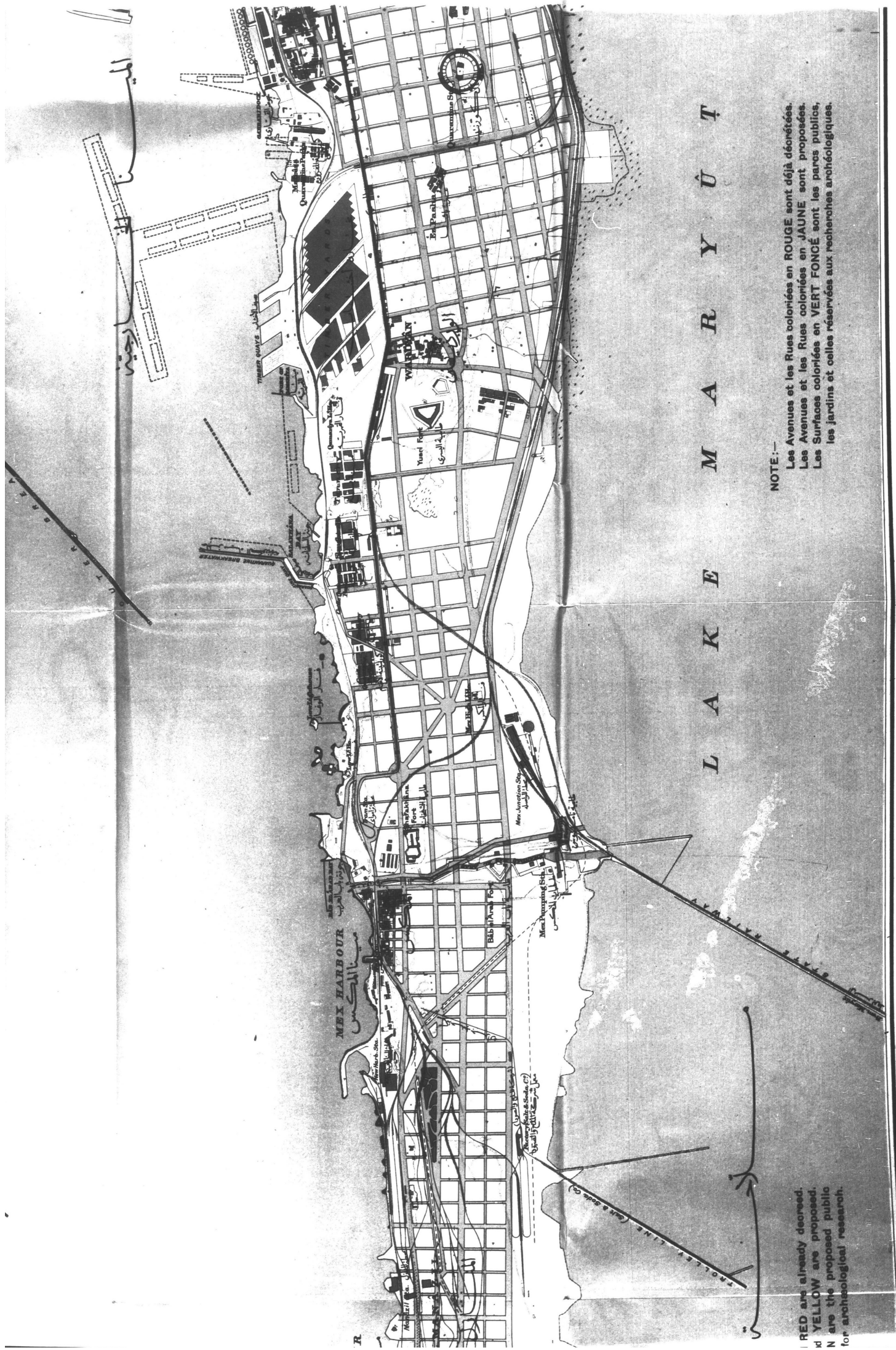
H

A

رندوت

NOTE:—

The Avenues and Streets coloured RED.
The Avenues and Streets coloured YEL.
The Areas coloured DARK GREEN are
parks, gardens and reserves for and



L A K E M A R Y U T

NOTE:—

Les Avenues et les Rues colonisées en ROUGE sont déjà dépeçées.
 Les Avenues et les Rues colonisées en JAUNE sont proposées.
 Les Surfaces colonisées en VERT FONCÉ sont les parcs publics,
 les jardins et celles réservées aux recherches archéologiques.

RED are already decreed.
 and YELLOW are proposed.
 N are the proposed public
 for archaeological research.